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ABSTRACT

The Sports Institute for Research Through Change Agent Research (SIR/CAR) is an interdisciplinary, public professional, study/action group, which brings together theoreticians and practitioners to investigate topics of vital interest to sport or athletic organizations functioning at the community, provincial/state, national, or international level. SIR/CAR, with associates throughout Canada and the United States, is equipped to bring consulting services to assist in organizational analysis, development, study/research and to sports organizations requiring professional services to develop change agents and bring about change by reducing the gap between avowed and actual organizational goals. SIR brings together theoreticians and practitioners capable of contributing to (1) community sports-related consulting service, (2) discovery of new sports-related knowledge, and (3) dissemination of that knowledge. CAR is a systems analysis technique bringing together practitioners and theoreticians in a three-phase process for organizational analysis, organizational development, and organizational research. CAR studies are conducted on the IDEA system: IDEA--Identification, Delineation, Evaluation, and Action. In sum, SIR provides a structure; CAR provides a systems analysis model; and IDEA provides a study/research methodology. (MM)

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ACCUMULATION AND APPLICATION OF KNOWLEDGE

THROUGH

SPORTS INSTITUTE FOR RESEARCH/ CHANGE AGENT RESEARCH (SIR/CAR) SYSTEM

address by

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Windsor, Ontario

to the

National Association for Physical Education of College Women Conference

Spirit of '76 Transformation - Never Ending Flight of Future Days

Asilomar Park, Pacific Grove
California

June 4, 1976

SP010 476

PART I

HIGHER EDUCATION IN TRANSFORMATION: ACCUMULATION AND APPLICATION OF KNOWLEDGE BY SIR/CAR*

The University of Windsor is the home of the Canadian-American Seminar. Attendance and review of the publications of the first two decades of this high level intellectual look at common socially significant questions of the United States and Canada convinces the reader that these two cultures are fundamentally quite different politically, economically, socially, educationally, and cybernetically.[1] Despite the differences in Canadian and American culture, it can be said, in general, that these two countries have enjoyed a symbiotic relationship and have suffered through many common problems. One of these is the continuous debate on the model and method to be utilized in the accumulation and application of knowledge in study/research.

Canadian-American Study/Research

Since scholarship and science by definition transcend political boundaries, it is not surprising to find that Canadians and Americans share the common concern for the most effective and efficient model and method for study/research. It is surprising and depressing to reflect on the amount of energy and resources which have been wasted on the dysfunctional acrimonious debate which permeates both of our countries on the relative merits of scholarship vs. science. In Canada, as in the

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*SIR/CAR is the registered trademark for the Sports Institute for Research/Change Agent Research which is housed in the University of Windsor, Faculty of Human Kinetics. SIR/CAR would like to acknowledge the support of Canada Council and the Ontario Ministry of Education. This specific presentation is based in part on a workshop funded by the NAPECW/NCPEAM Scholarly Directions Research Committee.

United States, the pendulum of preference swings back and forth between hard sciences, (pure basic, reflective or curiosity research) and the soft sciences (applied action, frontier or exploratory study/research).

Ironically, it is neither scholars or scientists who control the swing of this pendulum, but rather research funding agencies and the society on which they depend (and to whom they are accountable).

The more dependent scholars and scientists are on environment for support, the more they will be forced to investigate questions which are important to the environment, and the more they will have to provide answers from which the environment and society can benefit. Similarly, the more the actual research work depends for its success and access to data within the environment and society, the more the environment and society will control the kinds of investigations and what kinds of experiments can and cannot be conducted.

Rightly or wrongly, research grant and funding agencies have come to the conclusion that the knowledge explosion and technological complexities, combined with demands for accountability, require a consortium of discipline/professional, study/research experts functioning under the participative direction of "a specialist in generalization" as research manager.[2] This is particularly true in social science research extending into human affairs. The 'isolation of the problem' is no longer feasible. The nature of the field of study makes it impossible always to control the course of investigation, since 'the problem' is accompanied by an individual or group of individuals. Access by the researcher to the data necessary for the investigation depends on obtaining permission from the participants, permission granted only in return for some benefit.

This philosophic and practical debate has particular relevance in an era of hard times in higher education. The increased social stress on universities and funding agencies for 'more scholar per dollar' and 'more relevance for the real world,' predicts an inevitable shift towards Frontier Action Research (with a concomitant decline to a magnificent few independent scholar-scientists closeted in the library and/or laboratory). The Corry-Bonneau Report in Canada[3] and the Coleman Report in America[4] dictate a decade of Frontier Action Research focused on problem solving-policy planning, rather than pure basic research focusing on curiosity seeking-discipline discovering.[5]

SIR/CAR maintains communication, finances, state of the art and the cycles of research/study spending suggest that it would behoove scholars and scientists (in both the hard and soft sciences) to join forces with practitioners to come to grips with socially significant questions likely to result in a payoff.

NAPECW/NCPEAM Scholarly Directions Research Committee

The swing of the pendulum to Frontier Action Research is a development which will be lamented by some, but applauded by many, physical and health educators. For many years eminent NCPEAM/NAPECW scholars and scientists such as Bruce Bennett, Pearl Berlin, Lawrence Locke and John Massengale have lamented either the dysfunctional conflict between theoreticians and practitioners and/or the overemphasis on expending study/research resources to "find definitive answers to specific minute questions, rather than tentative solutions to significant problems confronting our society."[6] Further rationale and reinforcement for the direction of higher education research was provided by your recent Quest Monograph 25 focusing on Graduate Studies in Physical Education.[7]

The insightful interview by Daryl Siedentop with Walter Kroll, Lawrence Locke and John Loy, focusing on "Scholarship and Research in the Graduate Program" provides further reinforcement for a new model and method for accumulating and applying knowledge.[8] My colleagues in SIR/CAR agree with Siedentop when he states "lots of things that we're interested in investigating in physical education do lend themselves to programmatic research - team efforts, group investigations where perhaps a graduate student might come in;" with Walter Kroll suggesting that in the hard sciences, "almost every dissertation, thesis or faculty research project and research grant is done by everyone...it is very often impossible for one person to collect the data;" and agree with John Loy who laments the fact that students do not appreciate the fact that "what he is doing 'at these odd hours' is fun, that there is some sense of craftsmanship involved, and there is some sense of play involved."[9] Locke may focus on the fundamental question in the accumulation and application of knowledge, namely, the relevance of

> the old tradition...that the student must choose a thesis or dissertation topic 'independently' because this gives him experience in identifying a problem. The second tradition that the thesis or dissertation must be done 'independently' of programmatic research because then and only then can it be 'original research.' Neither tradition makes much sense.[10]

My colleagues in SIR/CAR agree with Locke that our current structure which develops ability to do independent research is archaic and further with his rejection of the dichotomy between discipline/profession and applied vs basic as "a false, not particularly useful, distinction," or

> the only useful distinction probably goes back to the impulse for the research itself, and whether it arises from a problem perceived or from inside the investigator's head and his grasp of the body of knowledge.[11]

SIR/CAR further ascribes to Locke's abhorrence of "the dichotomous view of research as something the other guy does and practical things as the stuff we do..." and advances "a new set of guidelines for faculty membership which makes explicit the expectation that inquiry is part of every professors's activity..."

> ...it is possible to influence the values of people who primarily have been involved in service and teaching with regard to their feeling about the value of research. Furthermore, I think it is possible to help some of them accept the proposition that ordinary mortals can inquire intelligently. Convincing people of that is something we've not done very well. In fact, we've probably done very well at the contrary, making research seem mystical and difficult and abstract.[12]

Lawrence Locke's commentary in Research in Physical Education at the turn of this decade, which is reinforced by many more academics both within and without physical education today, appears, on the basis of our readings and interaction with our American colleagues to be an accurate description of the state of the art in the U.S.A. and is most certainly applicable to Canada.[13] A Canadian counterwork to Research in Physical Education would stress that our studies to date have been scrupulous in research design, impecable in statistical treatment, beyond reproach on validity, reliability and objectivity, but regrettably irrelevant in terms of social significance, policy change. We have been able to answer "how do we know?" but we have been embarrassed by the question "what of it!" In general on the Canadian and American scene

Physical and Health Educators have been the best for "know how" process, but the worst for "know why" product.

My colleagues in SIR/CAR have come to the conclusion as many people have in North America that our study/research and post-graduate programs (particularly in the behavioral sciences) have failed to keep pace with the changing nature of our knowledge, the changing nature of our society, the need for new and different research roles in attacking complex social problems, and the sad lessons learned from previous attempts to achieve 'scientific respectability' at the expense of problem definition and understanding. For the most part we have been more interested in producing research technicians rather than analytic thinkers, and we have stifled our normal evolutionary growth with the concept that the real world of complex human problems is not really amenable to scientific study except in the laboratory setting. There has been a single role model which has pervaded our programs, namely, the experimental research-scientist model, and regardless of the nature of the problem or the talents or our theoreticians and practitioners every "respectable project" conforms to this model.

Stimulated by our American colleagues in the NAPECW/NCPEAM, influenced by progressive discipline/professional groups of scholars and scientists, and motivated by eminent international study commissions such as the UNESCO Faure report; my colleagues at Windsor and eventually throughout Canada and United States became convinced that there was a need for not only multi or interdisciplinary/professional studies but indeed trans or metadisciplinary-professional

task force study/research brings together theoreticians and practitioners to combine science and social action.[14]

Accumulation and Application of Knowledge

The Canadian-American constraints on funds for higher education in general and research funding foundations in particular, mitigate for increased astuteness on the part of study/research enthusiasts who will have to adhere more stringently to the basic SIR/CAR tenets of raising research funds:

1) Individuals and groups cannot secure grants if they do not apply.
2) Research grants are not awarded primarily on Pulitzer Prize rhetoric proposals or research design and statistical exercises but rather the relevance of the research to either practical problems or evolving theory.
3) Research organizations are just that - organizations subject to the same stresses and strains as other social institutions. In an era of accountability both hard and soft sciences should address themselves to projects with a high probability of immediate or intermediate payoff and/or significant areas being overlooked.
4) All things being equal, task force proposals will obliterate individual proposals (particularly in Frontier Action Research or social science endeavours).
5) All things being equal, non-profit voluntary research foundations, institutions or collegiums will be selected for specific projects over non-voluntary or profit research foundations and institutions, since accountability is being stressed and the cost/benefit

is higher in the voluntary mutual benefit service organization.

6) Topics to be studied can be found on the front pages of any local, national or international paper, or in radio or TV lead stories. The same social stresses which confront society are confronting social science research insitutions. In an era of economic decline endowment funds are being devastated. Research Foundations find themselves dealing with the marginal dollar and a limited amount of opportunity cost. In other words, whatever the research funding organization does, it does at the expense of something else it might be doing, and therefore there is a tendency to deal with immediate and intermediate socially significant problems, as well as areas in which there is a likely breakthrough from a theoretical point of view. Research organizations are very conscious of the opportunity cost of each project that they commission.

7) When Ford Foundation suggests that ecology is a problem or Canada Council decides that a high percentage of its resources will go into exploration studies, rest assured that university researchers and administrators will spontaneously perceive these areas as attractive and relevant.

8) Do a mini study (or at the very least a pilot project) and then write the proposal to secure a grant for a more thorough study. The complexity of task force research requires increased brainstorming by the group on conceptualization of the project and partial operationalization and experience in methodology prior to submitting a proposal for scarce resource funds. This is particularly essential as contract research comes more in vogue and research institutes or collegiums are forced to be more flexible and refashion both their human and physical resources.

9) Develop the project to fit the funds. The argument that research cannot be conducted because research funds are not available is, in many instances,

a cop-out. Teaching, coaching, administration and professional service are frequently carried on in less than an ideal situation. Most human endeavours are initiated on the proverbial 'shoestring.' There are many resources (people, place, program and purpose) available to initiate research projects. Success breeds success, and if a study can be initiated in embryo form, worthwhile study will attract research funds.

10) It is frequently advisable to cost account in terms of minimum, medium and maximum costs. When projects must be cut back, they can be reduced by a) becoming more specific or b) remaining as general, but probing in less detail. A rule of thumb would be that exploratory sutdies should be general in nature in order to identify fruitful areas of specific study.

SIR/CAR Structure and System

The shift in system from relatively independent basic research to task force action research teams requires a new organizational structure (accommodating theoreticians and practitioners) and a new action-oriented research model and method (allowing tentative solutions to significant problems, rather than definitive answers to minute questions). Inflexible university descipline structure and the rigid basic research model, method and technology are inappropriate to meet the challenge of today's future shock, conflict and change. Windsor's Sports Institute for Research (SIR) and Change Agent Research (CAR) presents a first generation alternative in terms of flexible research organization and frontier research model and method.

Notes and Bibliography

1. Listed below are the titles for the first seventeen annual Canadian-American presentations and publications as well as the project focus for the fall of 1976. All of these publications are available through the Canadian-American Seminar Office, University of Windsor, Windsor, Ontario, Canada, N9B 3P4, Attention: Dr. J. Alex Murray, Director.

1960-61 2nd, & 3rd Seminar

1962 - 4th Seminar, "Where is N.A. Going?"

1963 - 5th Seminar, "North American Solidarity"

1964 - 6th Seminar, "The Future of Canadian-American Relations"

1965 - 7th Seminar, "Canadian American Planning"

1966 - 8th Seminar, "The International Megalopolis"

1967 - 9th Seminar, "Canada and the United States In The World of the Seventies"

1968 - 10th Seminar, "Canadian-American Interdependence: How Much?"

1969 - 11th Seminar, "Labour, Business and Government in North American Society"

1970 - 12th Seminar, "Canada...The Unknown Neighbour"

1971 - 13th Seminar, "Alienation and Violence in the North American Community"

1972 - 14th Seminar, "Information Processing and The Right to Privacy"

1973 - 15th Seminar, "Sport or Athletics: A North American Dilemma"

1974 - 16th Seminar, "North American Energy in Perspective"

1975 - 17th Seminar, "Mass Transit: The Urban Crisis of North America"

1976 - 18th Seminar, "Health Delivery Systems"

These volumes may be purchased separately at $7.50 each for the 1st through 13th Seminar and $10.00 each for the 14th through 18th Seminar or as a set at the special reduced price of $80.00 (limited time only).

2. See E.J. Miller and A.K. Rice, Systems of Organization: The Control of Task and Sentient Boundaries. (London, England: Tavistock Publications, 1970).

3. Louis-Philippe Bonneau and J.A. Corry. Quest for the Optimum: Research Policy in the Universities of Canada, The Report of a Commission to Study the Rationalization of University Research (Ottawa: Association of Universities and Colleges of Canada, 1972).

4. "Ten Principles Governing Policy Research," by Dr. James Coleman in Footnotes, American Sociological Association, Vol. 1, No. 3 (March, 1973), 1.

5. Bernard Trotter and A.W.R. Carrothers. Planning for Planning: Relationships Between Universities and Governments: Guidelines to Process. A study prepared for the Association of Universities and Colleges in Canada by its Advisory Committee on University Planning. (Ottawa: Association of Universities and Colleges of Canada, 1974).

6. See Lawrence Locke, Research in Education. (New York: Columbia Press, 1969); and "Research and Teacher Shoot-Out at the OK Corral," Annual Proceedings of the NCPEAM Conference, Durham, North Carolina, 1969; and personal correspondence with Bruce Bennett and Pearl Berlin.

7. Graduate Study in Physical Education, Quest Monograph 25 (Winter issue, 1976).

8. Daryl Siedentop et al, "Scholarship and Research in the Graduate Program," Quest Monograph 25 (Winter issue, 1976), pp. 86-100.

9. Ibid. pp. 98, 94, 88-89 respectively.

10. Ibid. p. 90.

11. Ibid. p. 94.

12. Ibid. p. 98 and 100.

13. Lawrence Locke, Research in Physical Education (New York: Columbia Press, 1969).

14. See Philip Kotler, Marketing Management: Analysis Planning and Control (3rd ed.) (Inglewood Cliffs: New Jersey: Prentice Hall, 1972); Bernard Trotter and A.W.R. Carrothers, Planning for Planning: Relationship between Universities and Governments: Guidelines to Process (Ottawa, Ont.: Association of Universities and Colleges of Canada, 1974), and Proceedings of the NAPECW/NCPEAM Conferences 1970 through the present; and Edgar Faure, Learning to Be: The World of Education Today and Tomorrow (Paris, France: UNESCO, 1972).

PART II

SPORT INSTITUTE FOR RESEARCH/CHANGE AGENT RESEARCH (SIR/CAR)

IDEA MODEL AND METHOD

The Sports Institute for Research through Change Agent Research (SIR/CAR) is an interdisciplinary, public, professional study/action group which brings together theoreticians and practitioners to investigate topics of vital interest to sport or athletic organizations functioning at either the community, provincial/state, national or international level.[1] SIR/CAR, with associates throughout Canada and the United States, is equipped to bring consulting service to assist in organizational analysis, development, and study/research service to develop change agents and bring about change by reducing the gap between avowed and actual goals and means. SIR brings together theoreticians (scholars, scientists and community experts) and practitioners (professional educators and administrators, community experts, technicians and civic leaders) capable of contributing to: (1) community sports/athletic consulting service, (2) discovery of new sports/athletic related knowledge, and (3) dissemination of that knowledge. The term community is interpreted broadly. It is considered as a geographic unit, people, a social system, and also a community of solutions i.e. the boundaries within which a problem can be defined, dealt with, and solved.[2] Similar flexibility exists in the interpretation of discovery of knowledge and dissemination of knowledge where in projects and presentations have run the full gauntlet of applied to pure research reported in mass media and/or professional/discipline peer groups.

Anyone can join SIR/CAR and thereby contribute to the development

of sports/athletics upon the Canadian-American scene. Within SIR/CAR's three major program levels there has been a variety of projects such as (1) Community Service as in advising and assisting Windsor and Ontario Bikeways Coalition, consulting with the Ontario, Michigan, and United States commissions on conflict and cooperation in youth sports; (2) discovery of knowledge through study/research projects such as "Sport or Athletics in Little League Baseball" (funded by Canada Council), "Windsor Minor Hockey" (funded by Windsor Minor Hockey and the University of Windsor), "Windsor Aquatic Club" (funded by Canada Council), "School Class Swimming" (funded by the Canadian National Centre for Sport and Recreation through the Canadian Federation of School Athletic Associations), "The Role of Interschool Sports in Ontario Secondary Schools: Socializing Sport or Athletic Excellence in OFSAA" (funded by Ontario Ministry of Education), and "The Effect of Media on Sport/Athletic Behavior" (funded by the Ontario Royal Commission on Violence in the Communications Industry);[3] and (3) Dissemination of Knowledge by providing the framework within which interaction takes place: - The University of Windsor 15th Annual Canadian-American Seminar Sport or Athletics: The North American Dilemma, or 18th annual seminar Health Delivery Systems , and the establishment of the University of Windsor Sports Archives, which is one of the major holding libraries for sport or athletic Canadiana; and presentation of findings at seminars, numerous television and radio broadcasts, magazine articles, as well as presentation and publication in scholar/science proceedings and journals.

Change Agent Research Centre

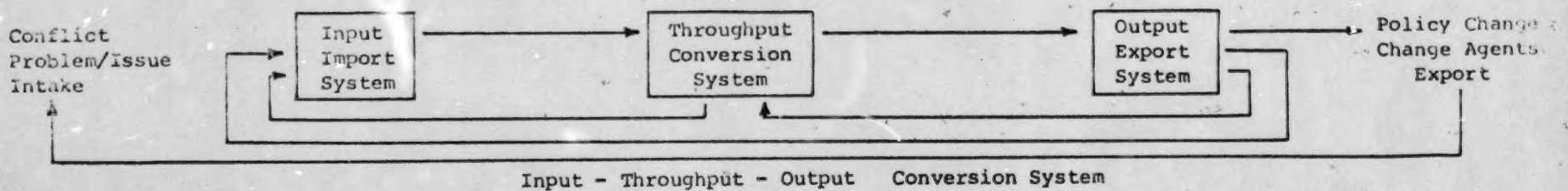
Change Agent Research is a systems analysis technique bringing together practitioners and theoreticians in a three-phase process for: Phase I - Organizational Analysis, Phase II - Organizational Development, and Phase III - Organizational Research. Phase I - Organizational Analysis is conducted by the SAW process of Seeing or observing by media and personal checklist, Asking or interviewing by Semi-Directed Focused Interview, and Written opinionnaire (along with Research and Development on extant written and audio-visual sources available). Phase II is conducted as Participative Clinics which include exposure to TV tapes on sport or athletic organization administration, psychology, sociology, principals and philosophy, health, fitness and motor learning, with an aim of allowing organization members to apply this material to their organization and develop themselves as a cadre of Change Agents. Phase III - Organizational Research consists of reorganizational audit by implementation of the SAW method to see if change has come about as a result of the intervention of the Phase II clinics.[4] See CAR Model below.

Change Agent Research attempts to blend qualitative and quantitative material - 'Humanize systems analysis,' modify its' image, on the one hand, of cold abstract theoretical subjects with little relevance to the problems of the real world - and, on the other hand, a subject responsible for many of the problems of a technological society. CAR is a problem solving technique which emphasizes the intake of conflict problems or issues and the export of policy change agents.[5]

Change Agent Research (CAR)

Organizational

Analysis (OA)	Development (OD)	Research (OR)
Phase I Organization Audit & Communication Feedback	Phase II Participative Clinics for Cadre of Change Agents	Phase III Organization ReAudit and CAR PAKaging
Monitoring by Seeing-Observing TV ☺ 😐 ☹ Asking-Audio Interviewing Written-Opinionnaire and sources plus written and audio-visual resources	Management by Objectives (MBO) Clinics with Confrontation, Sensitivity Sessions, Collaboration plus consulting with internal change agents	Remonitoring by Seeing-Observing TV ☺ 😐 ☹ Asking-Audio Interviewing Written-Opinionnaire and sources plus CAR-PAKaging to explain, apply & retest
$Observation_1$	eXperimentation and Treatment	$Observation_2$



SIR/CAR Inputs are relevant organizational questions or hypothesis as well as the necessary human and physical resources to conduct conversion Throughput study/research by cooperative task force teams of theoreticians and practitioners from the university and the community producing Output in terms of community service discovery of knowledge and/or dissemination of knowledge contributing to both practice and theory development. The ultimate goal is the development of change agents who can bring about appropriate policy change within their organization.[6]

SIR/CAR People and Process

SIR/CAR people are volunteers (theoreticians - scholars, scientists and community experts; and practitioners - amateur and professional executives, coaches, officials, sponsors, spectators and participants) who join together with students (undergraduates and postgraduates) who pool their expertise in task force teams to conduct study/research specifically aimed at reducing dysfunctional conflict (and concomitant dissipation of physical and human resources) in sports/athletics. Just as some dedicated individuals volunteer time to coach youth sports or to serve on executive in a school sport or amateur athletic organization, the members of SIR/CAR donate their expertise and professional time to conduct Change Agent Research projects in the area of recreation sport or athletics. By pooling the normal organizational opportunity resource bank for teaching, coaching, administration and/or study/research the human and physical resources

of the collegium are greatly enhanced and funds become available for clerical service, expenses, travel, supplies and equipment, computing service, media cost and all of the administrative paper work study/research entails. In short, the traditional voluntary base for sport/athletics provides an excellent foundation for the necessary human resources (skill, effort, expectation, time, knowledge, motivation) and physical resources (materials, facilities, donated services and money) for the task forces required for Change Agent Research.

SIR/CAR task forces have ranged from 5 members to 150. In general, they are divided into product and process task force teams The product task force team consists of university/college faculty and staff and community experts and practitioners from the organization under study; while the process task force team includes involved university and community personnel plus university postgraduate and undergraduate students acting as project leaders and project members respectively. The product task force team is responsible for conceptualization and direction of specific study/research projects while the overall process task force team is responsible for the actual conducting of the Change Agent Research project. For the most part, task force members continue their normal occupations; however, by combining teaching and learning, professional and community service, study and research, and by delegating authority and responsibility throughout the various phases of CAR and the elements of the SAW and R&D methodology, the task force is not only able to conduct the study/research but also at the same time fill the traditional university

responsibilities of Community Service, Discovery of Knowledge and Dissemination of Knowledge. In so far as possible, SIR/CAR are provided with a freedom to select their own area of contribution by ranking their interest and preference on a form similar to the SWOSSA/OFSAA - SIR/CAR Task Force form utilized during the current research study on "The Role of Interschool Sports in the Secondary Schools of Ontario" (funded on a grant from Ontario Ministry of Education and conceptualized and designed on a grant from the NAPECW/NCPEAM Scholary Directions Research Committee).[7] See Appendix A for the month long Program Evaluation Review Technique (PERT) Project Team Training Program which is utilized for developing project leaders and project members.

From an operational point of view the boxes of the various project and program levels represent a constellation of colleagues, not necessarily one individual. Boxes may be occupied by an individual, pairs or groups and the individual may occupy more than one box. For example, the project leader for Asking by Semi-Directed Focused Interview could consist of an individual whose major task this is, or it could include any or all of the project leaders, system project leaders and project members. In so far as possible, university professors and community volunteers are given an opportunity to select their areas of interest and expertise. All university and community representatives volunteer their time as do students when they are learning the system or are involved in a SIR/CAR project as a class project, individual research study and/or thesis endeavour. Even

SWOSSA/OFSAA - SAW/CAR Task Force

Name _____ Phone Number _____

Address _____

Project and Leader or Advisor _____

Faculty or Stream _____

SAW Method - Seeing - Observation
Asking - Interviewing (SDFI) Personal _____ or Telephone _____
Written - Questionnaire
Opinionnaire

Project Member (rank interest & preferences)

☐ Seeing - Observation
- ☐ Slides - 35mm Camera ☺ 😐 ☹
- ☐ TV, Super 8MM or 16MM film & audio
- ☐ Check List Observation
  - ☐ players and coaches
  - ☐ parents and fans

☐ Asking - Interviewing
- ☐ Board of Education — Selected / Appointed
- ☐ School Administrators
- ☐ Teacher coaches — physical education / non phys. ed.
- ☐ Teacher non coach — physical education / non phys.ed.
- ☐ Players
- ☐ Officials
- ☐ Parents
- ☐ General public

☐ Written
- ☐ Review of literature
- ☐ Questionaire
- ☐ Opinionnaire
- ☐ Computer Application
- ☐ Review of audio-visual services

Other Projects _____

Personal experience, expertise and/or equipment _____

Time available _____

Assignment _____

Individual Research or Special Project _____

Director of Project or Advisor _____

Service ☐ _____ Activity _____

Intramurals
- Men ☐ activity _____
- Women ☐

Intercollegiate
- Men ☐ — Mgr ☐ / Stats ☐
- Women ☐ — Mgr ☐ / Stats ☐

Sport _____

Others _____

Name _____ Phone Number _____

Address _____

students who have reached the point of diminishing returns in developing their study/research expertise and/or fulfilling degree requirements receive modest honorariums. The removal of salaries, wages and consulting fees (except for clerical and technical service) eliminates most of the financial feuds which frequently accompanies study/research projects (and indeed prevent many from ever getting off the ground). Many promising scholars and scientists price themselves outside the market thereby eliminating themselves, their students and community from worthwhile study/research projects. Failure to produce in study/research as a result of a lack of funds is frequently a cop out. Teaching, coaching and administration frequently go on in less than an ideal situation - why not research? SIR/CAR provides a viable structure and process for conducting task force research on either a voluntary or funded basis. The specifics for accumulating and applying knowledge by SIR/CAR are listed below under the IDEA format.

IDEA FOR SIR/CAR

Change Agent Research studies are conducted on the IDEA system: IDEA = Identification, Delineation, Evaluation & Action. The impetus for the IDEA format originated in the 8th Annual University of Windsor Canadian-American Seminar by the late international Greek scholar/scientist Constantinos A. Doxiadis who in 1966 decried the lack of a macro study/research systems analysis technique to cope with the technology and cybernetics of the International Megalopolis.[8] American educator

John Dewey, and Physical and Health Education colleague and disciple Dorothy LaSalle of Wayne State University had indeed been pleading for problem centered study/research throughout the 20th century.[9] SIR/CAR adaptation of the IDEA format is appended on the attached page and described below.

Identification

The Felt Need and request for SIR/CAR service must originate with the organization to be studied. Specific criteria are spelled out under Felt Need on the IDEA format. A wide variety of issues have prompted studies to date including a decline in organizational membership, frustration among participants or the public, excessive aggression and violence, lack of leadership and personality problems, and/or commissions initiated at the municipal, provincial/state, national or international level.

The need for the SIR/CAR workshop which was held in the fall focusing on "Socializing Sport or Athletic Excellence in the Interface of Secondary School Sport and Youth Amateur Athletics: a Co-operative Change Agent Research Project Involving Michigan, New York and Ontario" (funded by the NAPECW/NCPEAM Scholarly Directions Research Committee) became apparent over recent years as universities in the states/provinces received increased requests from secondary schools consulting service and assistance and answering critical questions such as 1) the role or status of sport or athletics in the

Change Agent Research (CAR)
Model and Method

IDEA Method = Identification, Delineation, Evaluation & Action

I Identification
- A Felt need = request for SIR/CAR service
- B Problem = Questions of
  1. role and status of sport or athletics
  2. conflict in interface of (a) local, (b) provincial, (c) national and (d) international
  3. relative significance of variables of (a) technical skills, (b) administrative decision-making and (c) public image
  4. effect of equating and evaluating amateur sport on the criteria of professional athletics or vice versa.

II Delineation
- A Research and Development
  - 1. Micro studies (past)
    - clinics on technical skills
    - psychology of coaching
    - philosophy
  - 2. Macro studies-SIR (future)
    - professional athletics
    - amateur sport
    - youth sport
      - international
      - national
      - local
    - educational sport
      - elementary
      - high school
      - university
- B Model=SIP
  1. ultimate goal
  2. conflict or obstacles
  3. structure
     a) task
     b) structure
     c) control
  4. individuals & groups
     a) traits
     b) situation
     c) behaviour
  5. social stress (outside) organization
  6. constituent strain (within) organization
  7. recommendations for change or alternate management techniques
  8. restructure of task, structure and control
  9. reorganization of individuals and groups on the basis of traits, situation and behaviour
  10. change and trend

III Evaluation
- A Universe/sample = executives
  managers and coaches
  officials (referees)
  sponsors
  parents
  players
  general public
- B Research Design =
  a) Seeing (observing)
     - TV
     - Faces Projection attitude (non-parametric)
     - Social Index (parametric)

1. Phase I — Organizational Audit=SAW & Communication Feedback
   - Asking - Semi-Directed Focused Interview - (SDFI) / SIR Model
   - Written - Questionnaire and Reference

2. Phase II
   b) Dissemination of Knowledge
   1. Administrative Science
   2. Sociology of Sport
   3. Psychology and Principles
   4. Health and Fitness
   5. Biomechanics and Movement
   6. Group Dynamics and Sensitivity Sessions

   c) Development of Cadre of CAR Researchers

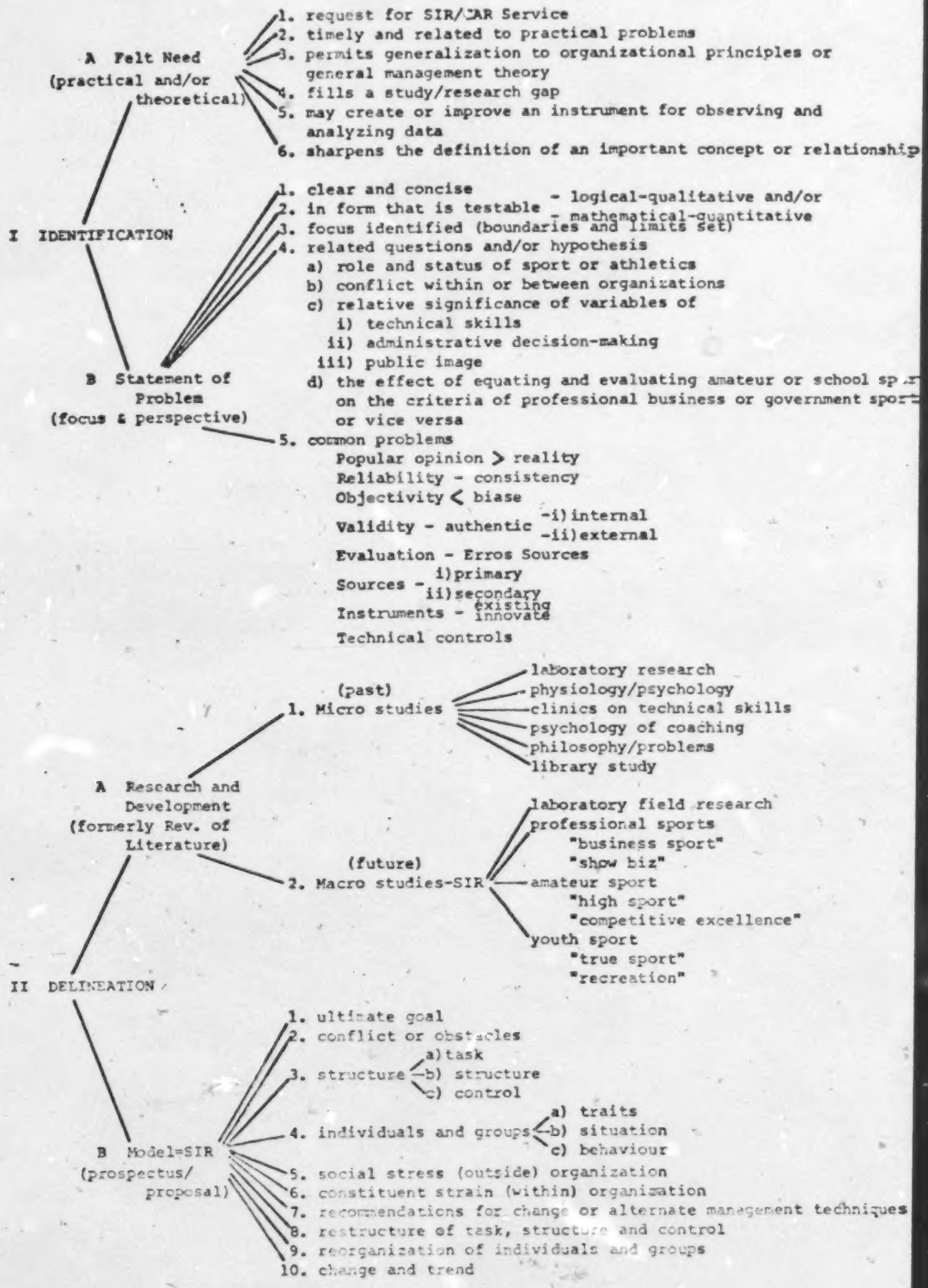
3. Phase III
   - Discovery of Knowledge by Reaudit
   - Packaging of CAR
     a) CAR Monograph
        IDEA, SIR Model, project team preparation
     b) instrumentation and instructions on
        i) collection; ii) preparation of raw data; iii) processing and iv) analysis in SAW method in Phases I & II
     c) Phase II TV clinics and group dynamics guide
     d) computer programs

IV Action
- A Summary Recommendations and Conclusion
  - Immediate Change
  - Intermediate Change
  - Long Range Change
- B Future Research
  - Other regions
  - CAR in other sports
  - longitudinal study
  - Cross sectional study including other provinces
  - Comparative cross sectional study

RM:pb/11/1/75

Sport Institute for Research
Change Agent Research (SIR/CAR)

IDEA Format = Identification, Delineation, Evaluation & Action


I IDENTIFICATION
A Felt Need (practical and/or theoretical)
1. request for SIR/CAR Service
2. timely and related to practical problems
3. permits generalization to organizational principles or general management theory
4. fills a study/research gap
5. may create or improve an instrument for observing and analyzing data
6. sharpens the definition of an important concept or relationship
B Statement of Problem (focus & perspective)
1. clear and concise
2. in form that is testable - logical-qualitative and/or - mathematical-quantitative
3. focus identified (boundaries and limits set)
4. related questions and/or hypothesis
a) role and status of sport or athletics
b) conflict within or between organizations
c) relative significance of variables of
i) technical skills
ii) administrative decision-making
iii) public image
d) the effect of equating and evaluating amateur or school sp
on the criteria of professional business or government spor
or vice versa
5. common problems
Popular opinion > reality
Reliability - consistency
Objectivity < biase
Validity - authentic -i) internal -ii) external
Evaluation - Erros Sources
Sources - i) primary ii) secondary
Instruments - existing innovate
Technical controls
II DELINEATION
A Research and Development (formerly Rev. of Literature)
1. Micro studies (past)
laboratory research
physiology/psychology
clinics on technical skills
psychology of coaching
philosophy/problems
library study
2. Macro studies-SIR (future)
laboratory field research
professional sports
"business sport"
"show biz"
amateur sport
"high sport"
"competitive excellence"
youth sport
"true sport"
"recreation"
B Model=SIR (prospectus/ proposal)
1. ultimate goal
2. conflict or obstacles
3. structure a) task b) structure c) control
4. individuals and groups a) traits b) situation c) behaviour
5. social stress (outside) organization
6. constituent strain (within) organization
7. recommendations for change or alternate management techniques
8. restructure of task, structure and control
9. reorganization of individuals and groups
10. change and trend

A Experimental Design (Plan)

1. conceptualization and operalization of design
   Type: Historical, Empirical, Experimental, Philosophic
   Purpose: Exploratory, Survey, Descriptive, Inferential, Explaining, Predicting
2. clear statement of the questions or hypothesis
   -nominal=yes & n
   -rank= +,-,=
   -interval=A>B=C<
   -ratio=-2,-1,0,1
   a) null Hypothesis (H_0) and alternate (A_1)=,>,<
   b) statistical test (parametric and/or non-parametric)
   c) significance level
   d) sampling distribution (df)
   e) rejection region (df & level)=
   f) decision

	True Nature H_0	True Nature H_1
Popular H_0	95	5
New H_1	5	95
Error	Type I producer	Type II consumer

3. distinguish independent (criterion or drive), manipulated or fortuitously seized and dependent (predictors or reaction) measured, changing variables
4. definition of terms
5. how measured (qualitative and quantitative) collecting & analyz
6. population/sample - random, stratified, quota, etc.
7. control of interfering variables (limitation and delimitation)
8. experimental and control groups
9. manual or computer analysis (SAS, SPSS, Omnitab)
10. interpretation

II EVALUATION

1. Phase I Organizational Audit=SAW & Communication Feedback

Seeing -Media -slides -film
-Personal
Observation -Faces Prop attitude (non-parame social Inde
cooperation- (parametr
confrontation-

Asking -Semi-Directed Focused Interview -open -structur
-(SDFI)/SIR Model

Written -Opinionnaire -closed -structured

Research & Development
-Retrieval (ERIC, SMIRS, LIRS,
-manual

2. Phase II

Dissemination of Knowledge
1. Administrative Science
2. Sociology of Sport
3. Psychology and Principles
4. Health and Fitness
5. Biomechanics and Movement
6. Group Dynamics and Sensitivity Sessio

B Method of Collecting & Analyzing Data (procedure & product)

Development of a Cadre Change Agents
Confrontation
Role Reversal
Sensitivity Sessions
Brain Storming
Transactional Analysis

3. Phase III
Discovery of Knowledge by Reaudit
Packaging of CAR -
a) CAR Monograph, IDEA, SIR Model, project team preparatic
b) instrumentation and instructions on i) collection; ii) preparation of raw data; iii) processing and iv) analysis in SAW method in Phases I & II
c) Phase II TV clinics and group dynamics guide
d) computer programs

IV ACTION

A Summary Recommendations & Conclusion
Immediate Change
Intermediate Change
Long Range Change

B Future Research
Other regions
Car in other sports
Longitudinal study
Cross sectional study including other provinces
Comparative cross sectional study

schools and/or community, 2) conflict in the interface of local, state/provincial, national and international sport or athletic organizations, 3) relative significance of variables of technical skills, administrative decision making, and public image or expectation, and 4) the effect of equating and evaluating amateur or school sport on the criteria of professional athletics, or vice versa. The specific questions which have arisen in the SIR/CAR study on "The Role of Interschool sports in the Secondary Schools of Ontario - Focus on SWOSSA/OFSAA," (funded by the Ontario Ministry of Education(are listed on the Semi-Directed Focused Interview schedules for adults and players, appendix B and C respectively. The questions emerging in Michigan and New York seem similar in nature.

The thesis being tested is that many of the problems which plague educational sport originate not at the technical skills level, but rather in administrative decision making on the ultimate goal and the way educational management manifests to society the role and status of sport and education. These difficulties are heightened by the current inflationary trend and inordinate expenditure of resources at the national and provincial level resulting from the impending Montreal Olympics. The hypothesis tested is that effectiveness and efficiency is blocked when schools, leagues, and associations equate and evaluate educational sport (and the supporting service organization) with the mission and method of amateur or semi-professional athletics (and the supporting commonweal organization). Further, it is hypothesized that when schools segregate classroom teaching, study

and professional service, the school fails to realize the full potential of the community school lifelong laboratory.

Delineation

Research and Development dealing with organizational innovations and approaches to their study can be categorized into several classes. With respect to the integration, utilization and implementation of the output of innovation-producing activities such as R & D and Operational Research/Management Sciences (OR/MS) the approach may be grouped into two points of view. First, there is the approach which, along with the development of a theoretical base and testable propositions, reflects in its methodology an emphasis on longitudinal studies in 'real' organizational time, i.e., while the events of interest are occurring. Another feature of this methodological approach has been an increased emphasis on the design and conduct of field experiments and the utilization of natural controlled experiments. This approach has been developed mainly by Ralph M. Stogdill and his associate in the Ohio State Leadership Institute[10] and by Rensis Likert, Daniel Katz and Robert Kahn and associates in the University of Michigan Survey Research Center and the Center for Research on the Utilization of Scientific Knowledge.[11]

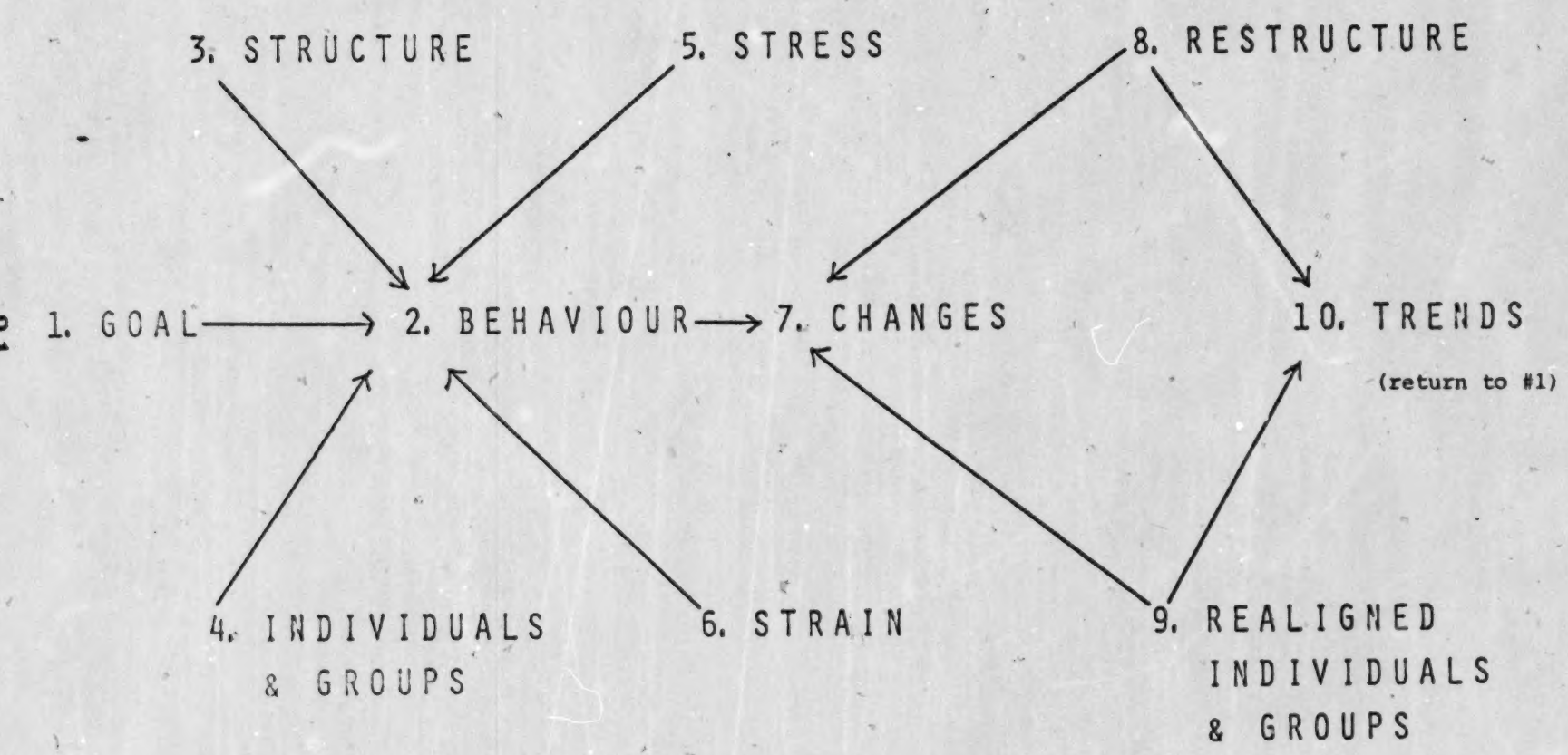
The second classification refers to laboratory experiments or simulations. This approach has been developed principally by Churchman and his associates in a series of experiments conducted in the

Institute of Management Science at the University of California in studies of implementation.[12]

Speaking more specifically of Research and Development to date in both educational sport and amateur athletics, we find a wealth of micro studies on competitive skills, the psychology of coaching, sociology of small group teams, and philosophic treatises dealing with persistent problems. In this project School Management Information Retrieval (SMIRS) and Educational Research Information Centre (ERIC) have been utilized for computer retrieval of Research and Development in the area of school sport and amateur athletics. SIR/CAR has already conducted a computer retrieval search by ERIC and Lockeed Information Retrieval System (LIRS) on voluntary mutual benefi and service organizations. The result of both studies will be published in the fall of 1976 as annotated bibliographies. The International Research Business Study Unit (IRBSU) has conducted computer retrieval and already published a bibliography on commonweal, government and business organizations. In addition to location of written library information, an extensive search and acquisition is being conducted for audio-visual resources and development of audio taped input from experts in the field. SIR/CAR is one of the few organizations in North America focusing on Change Agent Research in youth sport or athletics. Extensive written reports, audio-visual aid presentations and audio-taped records are available from major research projects conducted over the past five years in the area of amateur sport or athletics.

The SIR Model listed below is a wholistic systems analysis model which allows organizations to analyze both goals and means (as opposed

SIR MODEL


3. STRUCTURE
5. STRESS
8. RESTRUCTURE
1. GOAL
2. BEHAVIOUR
7. CHANGES
10. TRENDS
(return to #1)
4. INDIVIDUALS & GROUPS
6. STRAIN
9. REALIGNED INDIVIDUALS & GROUPS

to an operational model which focuses on means).[13] The SIR Model is particularly adapted to voluntary or quasi-voluntary mutual benefit or service organizations (although it is also functional in non-voluntary business or government organizations, particularly in an era of human relations emphasis). In the study of secondary school sports the SIR Model will be utilized with the purpose of (1) identification of the function of sport or athletics in terms of the Ultimate Goal or mission of education; (2) assisting the ministries of education, provincial/state, regional, municipal or individual schools in identifying Conflict areas or Obstacles preventing achievement of the school; evaluation of dissonance between (3) Events such as Task, Structure, and Control; and (4) Individuals and Groups in terms of Trait, Situation, and Behaviour; (5) assessing Social Stress in terms of public and media pressure; and (6) Constituent Strain in terms of peer or parent pressure; (7) presentation of Alternative Recommendations to reduce conflict, and remove obstacles so that (8) readjusted Structure; and (9) realigned Individuals and Groups can achieve designated Goals. This is a cyclic model which reverts at this point back to number 1, ultimate goal.

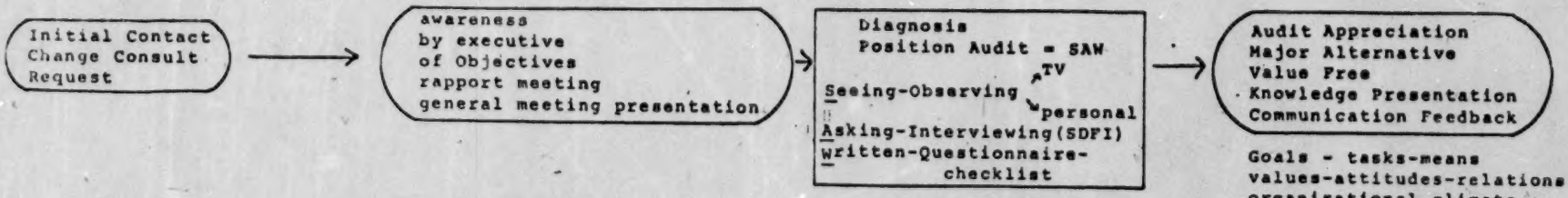
Evaluation

The research design utilized today is outlined in the OXO (Observation 1, eXperimentation and Treatment, and Observation 2) Change Agent Research Model listed above (See Part II, page 3A).

The operational procedure for CAR research is listed on the attached CPM, Critical Path Method for CAR. The normal procedure is to conduct Semi-Directed Focused Interviews (based on the SIR Model) with a highly selected stratified quota sample of organizational members.[14] (See

CPM - Critical Path Method for CAR

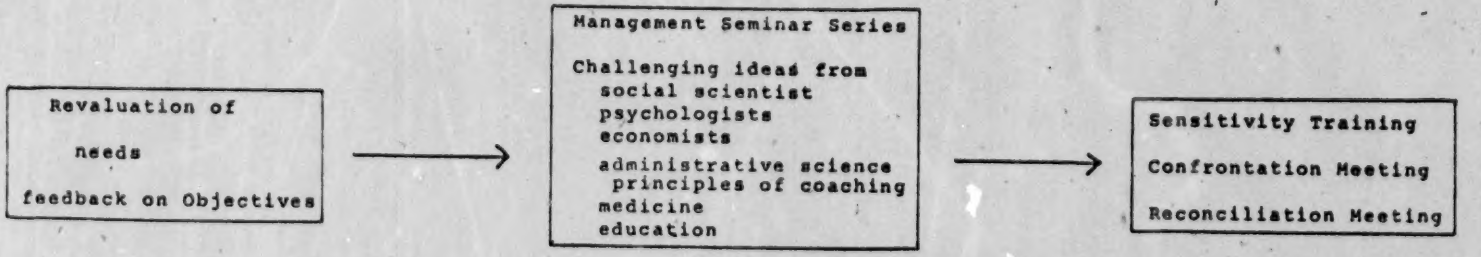
Phase I - Organizational Audit and Communication Feedback



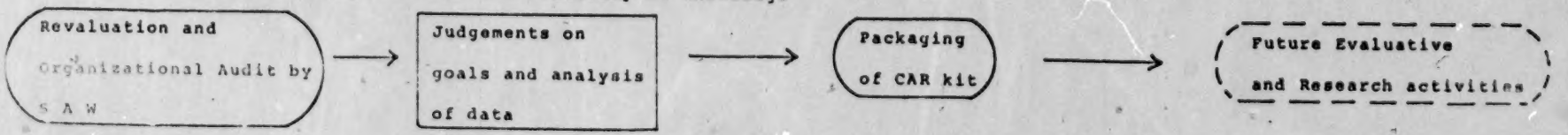
Consultee location

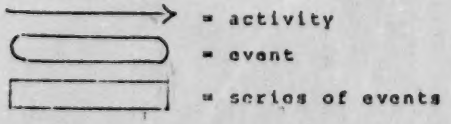
at Consultant Research location

Phase II - Dissemination of Knowledge - Treatment and Consultation



Phase III - Reaudit of Organization and Discovery of Knowledge





appendix B and C for specific samples of the Semi-Directed Focused Interview used for adults and students in the secondary school). The audio tapes are subsequently summarized by the interviewers and the transcribed tapes analyzed by a panel of experts to check validity, reliability and objectivity of the interview aspect of the SAW process. Subsequently, Written opinionnaires are developed utilizing the actual terminology of those within the organization and are circulated on either a stratified random sample basis or quota sampling technique to a much larger population of organizational membership. Simultaneously, a Seeing project team is analyzing behaviour by using porta-pak TV, 35 mm slides, Super 8 film (and occasionally 16mm) and a personal observation team is recording behaviour utilizing the Faces Projection Behavioural Attitude Scale and the Social Conflict/Cooperation Scale.[15]

Data is transferred to mark sense sheets and analyzed by the University of Windsor Computer and Media Centre. Parametric analysis and Non-parametric by computer (Statistical Analysis System - SAS; and Statistical Package for the Social Sciences - SPSS) is employed in analyzing written opinionnaires and behaviour observed at games (while the Mann-Whitney U Non-Parametric test is utilized in analyzing interview results and/or organizational subunits where the N is below ten). In this study, as in previous studies, the organizational structure is considered as the independent (criterion or drive) variable and the behaviour as the dependent (predictors or reaction) variables.

The universe for this particular study consisted of all of the citizens of Ontario who are involved in either primary or secondary way in secondary school sports programs. A highly select quota sample of approximately 1,000 of the age eighteen and older Ontario public was

surveyed by the IRBU in conjunction with Elliott Research Laboratories. Analysis provided a comparison including (1) urban and rural, (2) male and female, (3) a spectrum of socio-economic groups, (4) a spectrum of educational backgrounds, and (5) the seventeen regions of OFSAA. The IRBU survey extended one question to encompass public opinion for a sample of 5000 age eighteen and older citizens across Canada.

The primary sample for the study consisted of subjects from among OFSAA students, teachers, administrators, board members, parents and the general public in the target areas. The research design listed below allows for involvement of all seventeen regions of OFSAA, either as an experimental or control group. The Southwestern Ontario Secondary Schools Association (SWOSSA) was the experimental group. It is a representative region of the Ontario Federation of School Athletic Associations (OFSAA). SWOSSA encompasses a geographic configuration made up of Essex County Secondary Schools Association (ECSSA), Kent County Secondary Schools Association (KCSSA), and the Windsor Secondary Schools Association (WSSA). It consists of a total of thirty-five schools ranging in size from several hundred to several thousand, with a total enrolment of 32,000 students. The demographic spectrum ranges from rural to urban, including core city schools, as well as public and separate schools. Included are the major cities of Windsor, Chatham and Leamington. The control group at an association basis will be Lambton County Secondary Schools Association (LCSSA), which is part of the Western Ontario Secondary Schools Association (WOSSA) and includes the major city of Sarnia. Further detail on the application of the complete IDEA Method to SWOSSA follows on the ES/AB - SWOSSA IDEA Method chart.

Research Design

The Role of Interscholastic Sports Programs in Ontario Secondary Schools -
Socializing Sport or Athletic Excellence in Ontario Federation of School Athletic Associations
Focus on Southwestern Ontario Secondary School Association

	Time 1	Time 2	Time 3
	O	X	O
	Phase I	Phase II	Phase III
Experimental (E) SWOSSA (Selected events & organization)	Organization Audit & Communication Feedback → Seeing (TV, Slides, Film, Personal Observation); Asking; Written Opinionnaire	Participative Clinics to Develop Change Agents a) organization & administration b) psychology & sociology c) principles & communication d) movement & biomechanics e) physiology & fitness f) health & drugs g) group dynamics	Reorganizational Audit & CAR PAK → Seeing (TV, Personal Observation); Asking; Written Opinionnaire
Control$_1$ (C_1) CWOSSA, NOSSA, NYSSAA, OVHSAA, SOSSA, TDCAA, TSSAA, WOSSA (Selected events & organization)	O Asking Written Opinionnaire	Public Hearings (optional)	O_2 Organizational Audit & Communication Feedback → Seeing (TV, Personal Observation); Asking; Written Opinionnaire
Control$_2$ (C_2) COSSA, EOSSA, GHSSA, HIAC, IAGB, NWOSSA, THSSAA, TDIAA (Selected events & organization)		Public Hearings (optional)	O_1 Audit & Communication Feedback → Seeing (TV, Personal Observation); Asking; Written Opinionnaire

ES/AB - SWOSSA

IDEA Method = Identification, Delineation, Evaluation & Action

Identification
- Felt need = SWOSSA & OFSAA requested and endorsed
- Problem = Questions of
  1. role and status of sport in education
  2. conflict in interface of (a) school, (b) league and (c) association levels vis a vis amateur sport
  3. relative significance of variables of (a) technical skills, (b) administrative decision-making and (c) public image
  4. effect of equating and evaluating educational sport on the criteria of professional athletics

Delineation
- Research and development
  - (past) Micro studies: clinics on technical skills; psychology of coaching; philosophy
  - (future) Macro studies - SIR: Little League; Windsor Minor Hockey; Windsor Aquatic Club
- Model = 3M - Macro Model and Method (see attached)

Evaluation
- (Association) - (League) - (Schools) - (Subjects)
- Sample = SWOSSA (34 schools): WSSA = 15; ECSSA = 8; KCSSA = 11; control group (LCSSA) = 8
- students 32,000: competitors; non-competitors
- teachers 2,000: coaches 300 (P&HE; non P&HE); non-coaches (P&HE; non P&HE)
- administrators 68: non P&HE; P&HE
- Board of Education 51 elected; Parents and fans 34 appointed

Research Procedure = SAW
- Seeing (observing): TV; Faces Behaviour Projection (non-parametric); Social Index (parametric)
- Asking - Semi-Directed Focused Interview - (SDFI) / 3M Model
- Written - Questionnaire

Operations Methodology
- Phase I - Organizational Audit = SAW (see above) & Communication Feedback
- Phase II - Dissemination of Knowledge
  1. Administrative Science
  2. Sociology
  3. Psychology and Principles
  4. Health and Fitness
  5. Biomechanics and Movement
  6. Group Dynamics

  Development of Cadre of CAR Researchers
- Phase III - Discovery of Knowledge by Reaudit
  Packaging of CAR
  a) CAR Monograph
     IDEA, 3M Model, project team preparation
  b) instrumentation and instructions on i) collection; ii) preparation or raw data; iii) processing and iv) analysis in SAW method in Phases I & II.
  c) Phase II TV clinics and group dynamics guide
  d) computer programs

Action

Future Research
- Other regions of OFSAA
- CAR in other curricular and co-curricular areas
- Longitudinal study in OFSAA
- Cross sectional study including other provinces
- Comparative cross sectional study

The first control group consisted of (1) CSOSSA, (2) NOSSA, (3) NYSSA, (4) OVHSAA, (5) SOSSA, (6) TDCAA, (7) TSSAA, (8) WOSSA. Control Group 1 (C_1) were Asked in an interview and received Written opinionnaires at Time 1 and were See(n) by TV and personal observation, Asked and received Written opinionnaires at Time 3.

Control Group 2 (C_2) consisted of (1) COSSA, (2) EOSSA, (3) GBSSA, (4) HIAC, (5) IAGB, (6) NWOSSA, (7) PHSSAA and (8) TDIAA. Control Group 2 were See(n) by TV, personal observation, Asked by interview and received Written opinionnaires at Time 3 only.

In both the experimental and control groups selected events and organizational meetings were observed at league, regional associations and OFSAA provincial levels. Emphasis and analysis of the selected activities was on identification of trends of socializing sport or athletic excellence. Results will be compared with trends identified in antecedent studies in the amateur sport or athletic area. The data bank of results on studies conducted to date in Southwestern Ontario (excluding the SWOSSA/OFSAA study) consists of approximately 350 audio interviews, 4000 written opinionnaires, (2000 with adults and 2000 with youths); and observation of 1000 sporting events including 15 organizations and 150 suborganizations. Approximately 2000 slides, 2500 feet of Super 8 film and 40 hours of ½" porta-pak or 1" TV tapes have been collected and monitored.

In all, four Phase II Participative Clinics will be held. The initial clinic was the NAPECW/NCPEAM workshop in the fall of 1975 where approximately 20 delegates from the national, state/provincial, regional, and municipal level representing Ontario and Canada; and Michigan and

New York of the U.S.A. joined with 20 SIR/CAR members from Southwestern Ontario. Audio interviews, Written opinionnaires, as well as small group meetings and presentations focusing on the research design and operalization provided invaluable input for the design which follows.

Two provincial workshops were held, one in January and one in February of 1976. On Friday January 30, approximately 55 representatives from the Ministry of Education (Helen Gurney and Bev Goulding), elected and appointed board members, principals, department heads, teachers/coaches, students/players, parents, media representatives, university resource personnel and community experts drawn from SWOSSA came together at the University of Windsor Faculty of Human Kinetics building and also the Media Centre. Each delegate who attended the workshop filled in a Written opinionnaire prior to registration and in the first hour of the workshop was involved in an Audio interview conducted by postgraduate or senior honour students. Following a luncheon, a four hour workshop was conducted. Initially, delegates were divided on the bases of roles with 5 groups identified: (a) administrators from the provincial, regional and municipal level, (b) principals and department heads, (c) teachers/coaches, (d) students/players and parents, and (e) media personnel (attending as working delegates rather than covering the workshop) along with community amateur athletic representatives, referees and officials. After initial reaction to the four fundamental questions listed below (and sub-questions): (1) what is the ultimate goal of sport or athletics in the secondary school educational process, (2) what should be the interaction between school sport and amateur athletics, (3) what effect does sport or athletics have apon the teacher/coach and student/player and (4) what is the role of media. Delegates had an appointed

spokesman expressed opinion of the group to the entire workshop membership. Then following group reports and limited interaction (followed by a coffee break) the delegates were subdivided into 5 composite groups with a Ministry of Education representative, a board member, a principal, a department head, a teacher/coach, student/player, parent and media person in each group. SIR/CAR faculty and postgraduate facilitators remained at their original 5 stations and met with the reformulated groups who again looked at the 4 basic questions as well as interacting on the specific group reports which had been delivered. The overall workshop reconvened with the newly appointed spokesman to express tentative solutions which could be considered for implementation by SWOSSA and OFSAA at some future date.

The second workshop which was held during the month of February brought together approximately 120 delegates (2 student/players and 2 teacher/coaches, department heads or principals from 30 of the 33 schools in SWOSSA region) with 30 representatives of Boards of Education, community leaders, representatives of the media and 20 task force members. The delegates were divided into 6 specific interest groups as outlined below: (1) teachers/coach and classroom activities (2) teachers/coach and sport/athletic activities (3) student/player in school and sport activities (4) the role of sports/athletics in school activities (5) resource evaluation and communication systems and (6) sports/athletics and media. Each group included at least one University of Windsor faculty member and several post-graduate students. Groups were allowed complete flexibility to do their thing and the first hour of involvement ranged all the way from student/players involved in a warm up get acquainted Ba Fa - Ba Fa (confrontation vs cooperation) game to a formal lecture by two administration science professors on Program Planning Resource Evaluation and Communication

systems (PPRECS). Following lunch, the groups reconvened and addressed themselves to the fundamental questions listed above for the first clinic. Spokesman for each of the six groups then reported to the general assembly after which groups were reconvened and interacted. Ultimately, each group came forward with resolutions which will be advanced to the various schools, leagues, regional associations and ultimately to the Ontario Federation of School Athletics Association and the Ministry of Education. The final workshop will be held in the summer of 1976 focusing on explanation of data gathered.

One unique aspect of the clinic is the fact that afternoon working sessions were held in the Media Centre. All sessions were audio taped and many audio-visually taped to be edited into two half hour documentaries. One of these will report the specific results of the SIR/CAR study on "The Role of Interschool Sports in the Secondary Schools of Ontario - Focus on SWOSSA/OFSAA;" while the second documentary will focus on "the Changing Role of Secondary Schools Sports in the Province of Ontario."

Analysis of the organization of OFSAA and its various regions studied on the basis of the Professional-Amateur Dichotomy listed below which has evolved from previous and ongoing SIR/CAR studies (augmented by the extant research results of theoreticians or pragmatic observation of practitioners involved in sport or athletics throughout this century). The thesis inherent in this model is that a trend towards Athletic Excellence with a high committment of human and physical resources to a limited number of organizational members requires a highly Centralized Traditional Monocratic, Bureaucratic, business or commonweal organization in order to achieve effectiveness and efficiency: whereas a trend towards

PROFESSIONAL ATHLETICS WORK WIN PRODUCT STRUCTURE

(QUALITATIVE) (CUI BONO) (WHO BENEFITS)

ATHLETIC EXCELLENCE

SOCIALIZING SPORT

TRADITIONAL MONOCRATIC BUREACRATIC ROLE

EMERGING PLURALISTIC COLLEGIAL DECENTRALIZED PERSONALITY

AUTOCRATIC

BUSINESS (OWNERS)

GOVERNMENT (PUBLIC AT LARGE)

SERVICE (PUBLIC IN CONTACT)

MUTUAL BENEFIT (MEMBERS)

AUTONOMY (DEMOCRATIC)

AMATEUR SPORTS PLAY PARTICIPATION SERVICE

(QUANTITIVE)

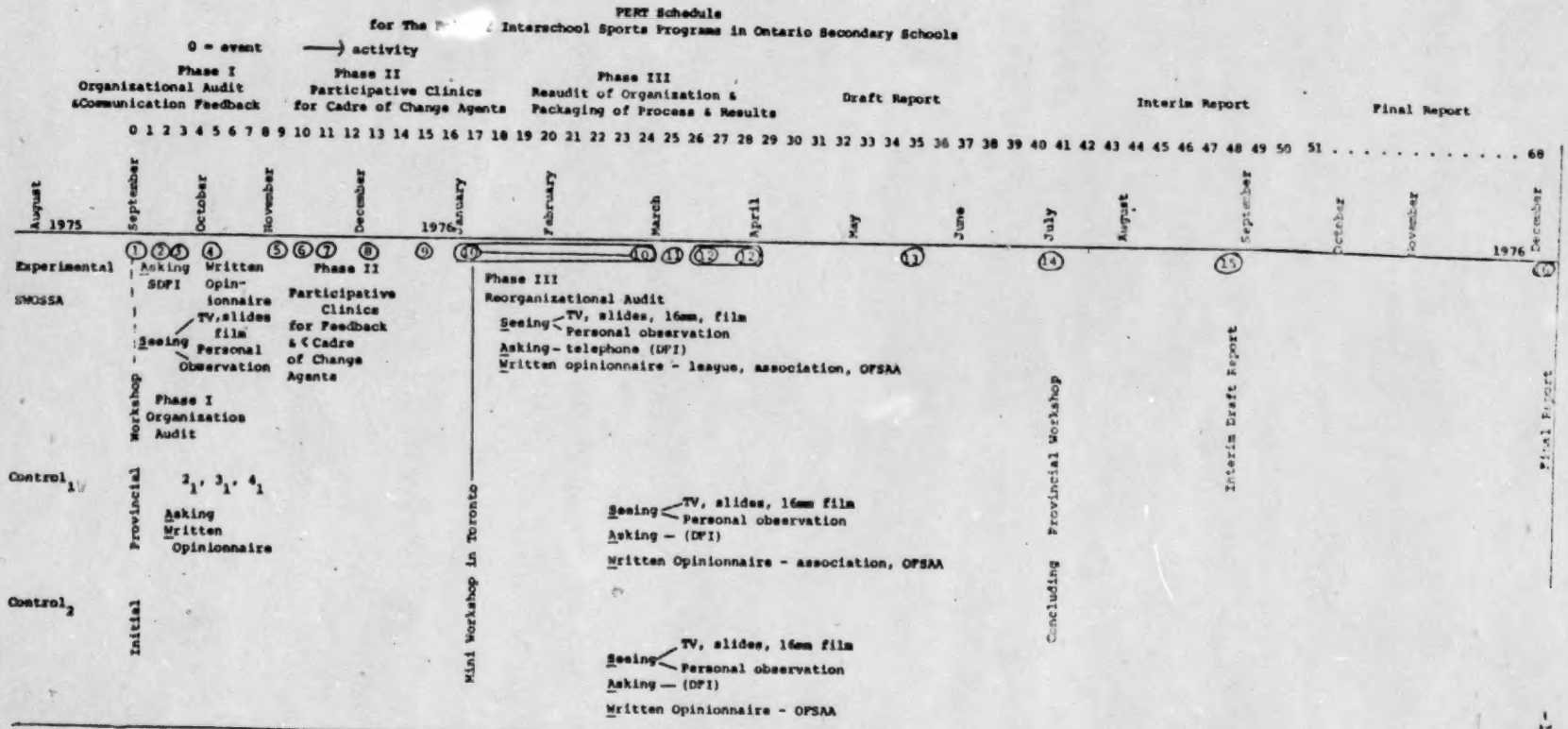
PROFESSIONAL-AMATEUR DICHOTOMY

Socializing Sport would suggest a Decentralized Emerging Pluralistic Collegial mutual benefit or service organization.

The selected activities included some individual (swimming, gymnastic and wrestling), dual (tennis) and team (volleyball, basketball, hockey and football) activities. Wherever possible events in which boys and girls participate were analyzed. The scope of activities runs from non spectator sports to spectator athletics. In addition, the full range of activities from recreational, intramural, interscholastic, as well as the classroom physical and health education and general activities were included in the sampling in order to assess the effect of the school program and the amateur athletic program on both student participants and non-participants and teacher coaches and non-coaches. Much of this data is already available in the school system and merely needs to be analyzed. Statistics Canada and the American counterpart should also be a vital source of data.

Operational Procedure

The PERT schedule of work to be done for "The Role of Interschool Sports Programs in Ontario Secondary Schools," is listed below. (See Appendix D for a breakdown of The PERT Program of Work) The program runs from 0 Week, September 1975, through Week 68, the last week in December 1976. The project was initiated during the first week in September with a province-wide workshop in Windsor involving representatives of the Ministry of Education, the male and female associate secretaries for each league of SWOSSA - OFSAA associations, along with



OFSAA Organization
IRBU Ontario Provincial Wide (& Canadian) <18 survey & analysis
PPRECS & Modified Delphi (Probable, Impact, Desirable)

selected OFSSA executives, SIR/CAR corresponding scholars, representatives of the IRBU, SIR/CAR and selected consultants.

The Change Agent Research program combining Organizational Analysis, Development, and Organizational Research is listed under experimental SWOSSA and runs from Week 0, Event 1 through Week 34, Event 13. Phase I, Organizational Audit, ran from Week 0 through Week 6 as the project team See behaviour by TV, slides, film and personal observation; while the project Asking team used the Semi-Directed Focused Interview to gather data for the Written opinionnaires. Phase II, Participative Clinics, providing feedback aimed at increasing the Cadre of Change Agents within SWOSSA, were conducted from Week 7 through Week 16. Phase III, Reorganizational Audit, including Seeing, Asking and Written Opinionnaire, were conducted from Week 17 through Week 34 and included selected league, regional and OFSAA events. Control Group 1 participated in Phase I, Organizational Audit in terms of Asking by Semi-Directed Focused Interview and Written Opinionnaire, approximately a week or so behind each event in SWOSSA. Finally, selected teams and associations from both Control Group 1 and Control Group 2 participated in the complete SAW process, with Control Group 1 participating in selected regional and OFSAA events from Week 24 through Week 34; while Control Group 2 was exposed to the SAW process in OFSAA events from Week 28 through Week 34.

Beginning in Week 0 and running through Week 34, the IRBU in cooperation with the Elliott Research Laboratories, conducted a province-wide (and Canadian) above-eighteen survey and analysis of attitudes, beliefs and perceptions of public opinion toward interschool sports

programs for secondary schools (and a lesser extent amateur and professional athletics).

Commencing in Week 10 and running throughout Week 38 a Program Planning Resource Evaluation Communication System (PPRECS) analysis and Modified Delphi (probability, impact and desirability) projection analysis was conducted by a project team under Megid Ragab and Ralph Cowan of the Faculty of Business Administration. The PPRECS analysis concentrates on quantitative and qualitative data on antecedent and current transactions, while the Modified Delphi opinionnaire will focus on the future. Emphasis is placed on the correlation between what is expected by professionals involved in secondary education and legislated by the Ministry of Education vis a vis contemporary behaviour and projected future probabilities.

Throughout the project frequent meeting were held between the principal investigators and representatives of the Ministry of Education, particularly the Supervisory Official and the Committee of Ministerial Officials. On selected occasions the Chief Educational Officer, or even the Director of Research, sat in on clinics with representatives of the Ministry of Culture and Recreation and/or Community and Social Services. It is likely more of this will come in the latter part of the project as the interface of educational sport and amateur athletics becomes apparent and results of public opinion and the educational community are tabulated. A mini-workshop bringing together a limited number of experts from the educational sport and amateur athletic area might be appropriate in mid-January or February of 1977. The interim report is due September 1, 1976 with the final report to be completed and submitted prior to December 31, 1976. The

Ministry of Education will publish a mongraph outlining the SIR/CAR system and dealing with the specific results of this particular study. It should also be noted that four University of Windsor postgraduate students are pursuing thesis topics as outlined below:

(1) "An Audit of the Objectives of SWOSSA Administrators," by Wendy Price under Gordon Olafson, and Megid Ragab,

(2) "An Investigation of the Relationship of Coaching with the Observed Classroom Teaching Performance of Secondary School Teachers/ Coaches;" by Bill McKnight under Dick Moriarty and Jay Powell,

(3) "Resource Allocation in OFSAA - Focus on Forcasting," by Bob Hedley under Dick Moriarty, and Ralph Cowan, and

(4) "Organizational History of OFSAA," by Paul Webb under Dick Moriarty and Alan Metcalfe.

In addition, two honour senior students conducted satellite studies under the title "Leadership, Coaching Style and Self-Perception - A Female Basketball Player;" and "Secondary School Sports, Health and Self-Perception."

Action

The motto for SIR/Change Agent Research is, "No Action Without Research; and No Research Without Action." The ultimate purpose of any project of the scope of "The Role of Interschool Sports Programs in Ontario Secondary Schools," is undoubtedly action. Conclusions and recommendations aimed at allocating scarce resources in the most effective and efficient means of obtaining desired ends should come forward as resolutions for consideration of the Ministry of Education aimed at achieving goals by optimal means. Management By Objectives (MBO), or making

all decisions on the primary goal of education, is indispensable in this era of educational accountability. Resources By Objectives is a natural but undeveloped concomitant concept and process of MBO. Similarly, Bottoms Up Management (BUM) demands shared Accountability from the Bottom as well as Middle and Upper management. Shared objective setting, policy development, resource allocation and accountability involving Task Force teams of theoreticians and practitioners is a possible outgrowth of any SIR/CAR project.

Undoubtedly the scope of this research project will also necessitate recommendations for future research, either in the form of increased cross-sectional indepth analysis in the province of Ontario or a longitudinal study. Another alternative would be to pursue a cross-Ministry study involving Education (school sport) and Culture and Recreation (amateur athletics) involving community school development.

The results of the Michigan study and the projected study by New York State University of Buffalo and the National Association for Sport and Physical Education will undoubtedly benefit both practitioners and theoreticians interested in the area of policy or Change Agent Research.

Notes and Bibliography

1. For a more complete description of SIR/CAR see Dick Moriarty and James Duthie, "Sport Institute for Research/Change Agent Research (SIR/CAR)," Canadian Association for Health, Physical Education and Recreation Journal, Vol. VX (March-April, 1974), pp. 21-23, 33-36. Also available in microfiche or hardcover from Research in Education ED096 748.

2. C.G., Ivey, University of Toronto, "Report of the International Conference on Physical Education, Edinborough, Scotland, 1975 reported in Ontario University Programs for Instructional Development #8 (December 1975), p. 8.

3. Copies of these research studies or abstracts are available either from the funding agencies or through the Technological Applications Projects (TAP) United States Office of Education, Washington D.C.

4. For a complete description of the theoretical base for CAR see Dick Moriarty, James Duthie, and Megid Ragab, "Change Agent Research: Combining Organizational Development and Organizational Research (CAR: OD + OR)," Management by Objectives, Vol. IV (May, 1975), pp. 35-43. Also available through Research in Education.

5. See E.J. Miller and A.K. Rice, Systems of Organization: The Control of Task and Sentient Boundaries (London,England: Tavistock Publications, 1970), for a complete analysis of a research institute structure and system.

6. See Research Program, Objectives, Policies, 1975: Institute for Research on Public Policy (Montreal, Que.: Institute for Research on Public Policy, 1975).

7. "The Role of Sports in the Secondary Schools Focus on the South-western Ontario Secondary Schools Association of the Ontario Federation of School Athletic Associations," is being conducted by

SIR/CAR on grant 939 from the Ontario Ministry of Education. This study is in part an outgrowth of the NAPECW/NCPEAM Scholarly Directions Research Grant which was afforded to SIR/CAR in the fall of 1975 to conduct the workshop on "Socializing Sport or Athletic Excellence in the Interface of Secondary School Sport and Youth Amateur Athletics: A Cooperative Change Agent Research project involving Michigan, New York and Ontario." A concomitant study is underway in the State of Michigan stimulated by Senators Purcel and Snyder and conducted on concurrent Michigan Sta[illegible]ill No. 39, "Research and Legislation in Youth Sports and Athletics." A Change Agent Research study is planned for New York State under the direction of former dean, Harry Fritz of New York State University at Buffalo (currently Executive Director of the NAIA). At his prompting, the National Association for Sport and Physical Education of the American Association for Health Physical Education and Recreation has set up a youth sport task force under the chairmanship of Lucille N. Burkett.

8. C.A. Doxiadis "the Prospects of an International Megalopolis," in The International Megalopolis, Proceedings of the 8th Canadian-American Seminar edited by Mason Wade (Toronto, Ont.: University of Toronto press, 1966), pp. 2-32.

9. See John Dewey, The Child and the Curriculum; and The School and Society (Chicago, Ill.: Phoenix Books, 1902, and 1900, 1915, 1943, 1956 and 1960); and Dorothy LaSalle, Health Instruction for Todays Schools (Inglewood Cliffs, N.J.: Prentice Hall Inc., 1963); and Guidance of Children Through Physical Education (Cranberry, N.J.: A.S.Barnes 1946; and Arnold Press Co. 1957).

10. Research results are contained in numerous monographs published by the Ohio State Leadership Institute and are available through the Centre for Business and Economic Research Division of Research College of Administrative Science, The Ohio State University, Columbus, Ohio, 43210.

Among Ralph M. Stogdill's research works worthy of note are: Leadership Behaviour: Its Description and Measurement (1957); Team Achievement under High Motivation (1963); Managers, Employees and Organizations (1966): and Individual Behaviour and Group Achievement (1959), published by Oxford University Press.

11. The resultd of research studies of the University of Michigan Survey Research Centre, Research Centre for Group Dynamics and the Centre for Research on the Utilization of Scientific Knowledge is contained in:

Rensis Likert, Patterns of Management (1961) and The Human Organization (1967) both published by McGraw-Hill Book Company.

The theoretical concepts and implications are contained in Daniel Katz and Robert Kahn, The Social Psychology of Organizations, (New York: John Wiley and Sons, Inc., 1966).

12. See M. Radner et al, "Intergration and Utilization of Management Science Activities in Organizations," Operations Research Quarterly, Vol. IXX (1968) pp. 117-141; A.H. Rubenstein et al, Some Theories of Organization. (Homewood: Irwin-Dorsey, 1966); and A.H. Rubenstein, et al. "Some Organizational Factors Related to the Effectiveness of Management Science Groups in Industry," Management Science. Vol. XIII, B508-B518 (1967).

13. The SIR Model was developed by Dick Moriarty by synthesizing the theoretical work of Ralph M. Stogdill and associates at the Ohio State Leadership Institute; Daniel Katz and Robert L Kahn and associates at the University of Michigan, Social Research Centre (and Research Centre for Group Dynamics); and Andrew W. Helpen of the University of Georgia. For a complete description of the theoretical base see Dick Moriarty, "A Model and Method for Organizational History," Proceedings of the Second Annual Canadian Symposium on the History of Sport and Physical Activity (May 2, 1972), Ottawa, Ont.: Canadian Association for Health Physical and Recreation, 1971, pp. 307-344.

14. See George D. Short and Cam Innes, "The (Semi-Directed) Focused Interview as a Tool of Historical Research (on Organizations)," Proceedings of the Second Canadian Symposium on the History of Sport and Physical Activity, at LaPointe Centre for the Study of Man, University of Windsor, May 3, 1972, pp. 232-243.

15. See Ann Marie Guilmette and Dick Moriarty, "SIR/CAR Field Research in Action," Proceedings of the 79th Annual National College Physical Education Association for Men, Hotsprings, Arkansas (January 8, 1976),

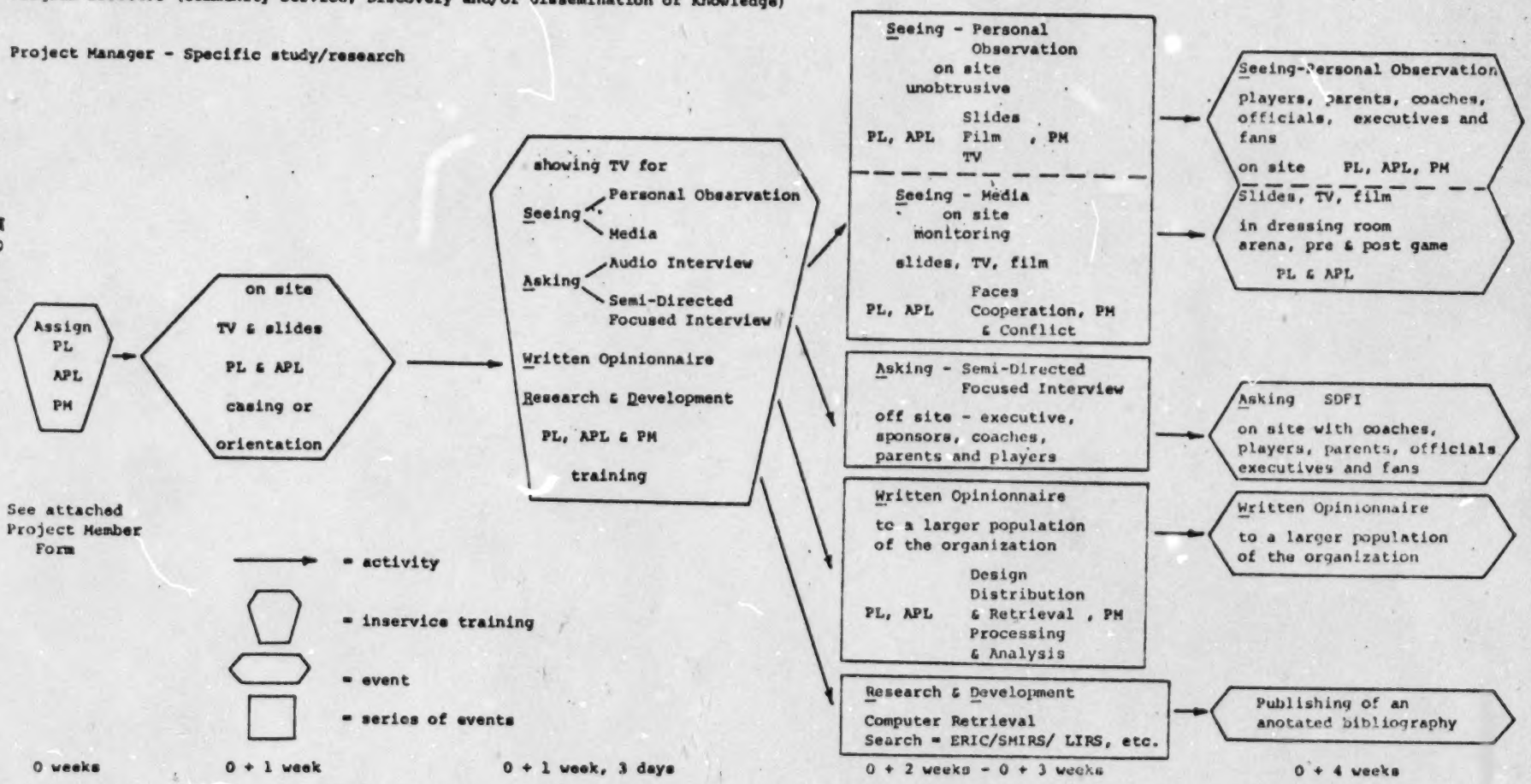
Program Evaluation Review Technique

(PERT) Project Team Training Program

Appendix A

Program Director (Community Service, Discovery and/or Dissemination of Knowledge)

Project Manager - Specific study/research



PD=Program Director/ PM=Project Manager/ PL=Project Leader/APL=Assistant Project Leader/ PM= Project Members.

Semi-Directed Focused Interview

Appendix B

List the following below in pencil on the cassette label before the interview.

Name of Interviewer _____

Name of Interviewee _____

Position _____ School _____ League _____ Association _____

Date _____ Place _____

Focus of Interview (Organization) _____

Note: _____ * (Name of organization)

Initial Statement: The University of Windsor and _____ are working cooperatively to make _____ more effective and efficient.

Reinforcement Statement: You are one of those closest to _____ and therefore I appreciate an opportunity to interview you and record your observations and feelings.

Elicit response on Items #1 - 12 for a) school, b) league (eg. ECSSA, KCSAA, WSSA etc) c) association (eg. SWOSSA) d) Provincial OFSAA.

1. Could you please identify the ultimate goal (mission) (1) you see in _____.
2. Could you comment on conflict (obstacles) (2) which prev.. achievement of this goal.

Events

3. Could you identify significant events (3) you see in _____ such as (3-a) task (or aims) for this year.
4. Could you comment on (3-b) structure (or organization).
5. Could you comment on (3-c) control (or administration).

Individuals and Groups

6. Could you please identify significant (4) individuals or groups you see in _____.
7. Could you comment o.. a) their traits (or characteristics).
8. Could you comment on ..-b) their situation (or roles)
9. Could you comment on (4-c) their behavior (or expectations).

External to Focus - Supra

10. Could you comment on (5) social stresses on _____ from outside the organization.

External to Focus - Infra

11. Could you comment on (6) constituent strain on _____ from within the organization.
12. Could you comment on (7) recommended changes (or alternate management techniques) you would like to see in _____.

Revert to #1 - 12 for each of a) school b) league (eg. ECSSA, KCSSA, WSSA etc.) c) association (eg. SWOSSA etc.) d) Provincial (eg. OFSAA)

13. What role, if any, do you feel the national association should play (eg. Canadian Federation of Secondary School Athletics/Sport Associations)?
14. What is the effect, if any, on interschool sports competition of the establishment of Sport Ontario and the subsequent funding of an increasing number of provincial sports-governing bodies;
15. What is the effect, if any, on high school sports programs of government support for non-school teams to travel to regional and provincial competitions;
16. What is the effect of inflated costs, especially for travel and officials fees, on high school sports competition;
17. What is the extent of the pressure on high school teacher-coaches to develop elite athletes for Ontario Games, Canada Games and Olympic competition;
18. What is the effect of increased time demands on teacher-coaches and the resulting effectiveness as a teacher in the regular classroom;
19. How do you feel about criticism of _____ (name appropriate one);
    a) executives - eg Board of Education Executive Secretaries
    b) Administrators Principal; V.P. Convenors
    c) Head of Physical Education
    d) Teacher/Coach
    e) officials, referees, umpires
    f) players
    g) parents
20. Some critics of _____ say there is too much stress on winning and too little fun! True or false?
21. What do you think of the intramural program?
22. What do you think of the Physical and Education program?
23. What do you think of co-educational, co-curricular activities?
24. At this point revert to any covert conflict which was alluded to during the interview.
25. Close with a positive thank you reaction for time and expertise of interviewee.

SEMI DIRECTED FOCUSED INTERVIEW FOR PLAYERS

Introduction

My name is _____. What is your first name?
first name only

This isn't a test. There are no right or wrong answers. I just want you to answer my questions so I know what you think of _____.
(fill in name of organization)

Elicite response on items #1 - 8 on each of a) school, b) league (eg. ECSSA, KCSSA, WSSA etc) c) Association(eg. SWOSSA), d) Provincial (eg. OFSAA).

1. Can you tell me about some of the problems there are in your _____ (CONFLICT)

Events

2a) Can you tell me who runs the _____? (CONTROL)

b) How does they/the person do it? (STRUCTURE) Do(es) the person/they have help?

c) Do you know why these people do this?

Groups and Individuals

3a) Can you tell who the important people in your _____ are?

b) Can you describe them? (TRAITS)

c) Why are they important? (ROLE) What do they do that makes them important?

d) How do they behave?

Constituent Strain

4. Are there any complaints from people who are part of your _____?

Social Stress

5. Do you know of any complaints from people who aren't part of your _____?

6. Is there any change you would like to see in _____? (CHANGE)

7. Some people say interschool is bad for growing boys/girls.
What do you say?
Some people say that winning is more important than having fun.
What do you say about this?

8. We have been talking about you playing _____ and all the other people who help you play. Can you tell me why everybody does this? (ULTIMATE GOAL)

9 Does sport fulfill the educational goals which have been established?

10. What is the role of interscholastic sports programs in Ontario?

11. Has the establishment of Sport Ontario and subsequently sport or athletic funding increased the pressure on educational sport?
(Note: Thirty million dollars realized through the lottery will have an extensive effect here.)

12. Does government support for non-educational teams' travel to regions increase pressure on education sport?

13. What is the effect of increase in cost of travel and officials' fees vis a vis amateur sport and educational sport?

14. Has the pressure on sport from government created carryover pressure to educational sport?

15. If interscholastic sport is an important part of the school educational program, how do demands on the teacher-coach affect the effectiveness of the teacher-coach in the classroom?

16. Should schools add, detract or retain the status quo in interscholastic sport?

17. Do you play in any community amateur teams? If yes, which ones? Run thru 1-8 for amateur team.

18. What do you think of intramural program?

19. What do you think of the physical education program?

20. What do you think of co-educational, co-curricular activities?

21. Revert to any questions unanswered or skipped over above.

22. Add any pertinent questions.

PERT Program of Work

1 = initial meeting of task force team bringing together organizational professional practicioners and research theoreticians.

1a= workshop for task force members and subgroup meeting of project leaders and members to train them in the SAW process, familiarize them with research and development to date, and adjust IRBU and SIR/CAR instruments for use in OFSAA.

2 = assignment of Asking or interviewing team by Semi-Directed Focused Interview with open-ended questions based on the SIR model focusing on what was and what is or change at the school league association and/or OFSAA level. This is a modified Delphi system. Interviews will be conducted with a stratified random sample of organizational components including board members, administrators, principals, teacher-coaches and teacher-noncoaches, parents, players and the interested community spectators and general public. IRBU public opinionnaire will be distributed.

2a= assignment of project teams for Seeing or observing early regular season by personal observation, audio tape, slides and TV.

3 = development of Written opinionnaire based on reaction to the SDFI interviews. The combination of Asking or interviewing and Written opinionnaire form of modified Delphi system going from general to specific, and past and present, (and also projecting for the future in executive interviews). The Faces Behaviour Projection Scale will be utilized to elicit feelings from youth participating in SWOSSA, with about a one-week lag. Audio interviewing and Written opinionnaire will be conducted in the eight associations in Ontario listed inControl 1.

4 = return of Written opinionnaires, development of an additional executive opinionnaire projecting for the future, and allowing opportunities for expression of opinion on what is probable, impact and desirable. (See WAC opinionnaire attached.)

5 = seeing or observing by TV and personal observation of fall activities and meetings.

6 = communication feedback on the results of the surveys and interviews providing each association of SWOSSA with an Organizational Audit.

7 = first of Participative Clinics in SWOSSA providing confrontation, group meeting and TV input on organization administration and management of conflict.

8 = Participative Clinic Session 2 providing sensitivity training and audio-visual input on social science and psychology, and principles of sport or athletics.

9 = Participative Clinic Session 3 with role reversal and management by objectives, and TV audio input on biomechanics and movement education.

10 = Participative Clinic Session 4 aimed at continuing development of a cadre of CAR practicioners and TV input on physiology of drugs and safety. Each clinic session will consist of small group interaction, one-quarter to one-half hour TV tape presentation, and one-hour application by participants.

11 = SAW method on league playoffs, meetings and public hearings throughout the 17 associations of OFSAA.

12-14 = SAW method on association and OFSAA championships and meetings.

15 = two-day workshop with the first day devoted to presentation of the results to practicioners in OFSAA and 17 regions, and the second day would be devoted to the meeting of task force and integrating and amplifying results in a multidisciplinary, interdisciplinary, or preferably transdisciplinary approach.

16 = interim report or Draft Report to be distributed for reaction.

17 = Final Report submitted to the Ministry of Education.

PART III

The Theory of Change Agent Research

The ultimate goal of all study/research is to reduce the probability of seeing the world as we would like to see it exist rather than as it does exist - ruling out plausible rival hypotheses which make comparison ambiguous and tentative. The ongoing controversy as to whether to realize this ultimate goal by Pure Basic Research or Frontier Action Research seems interminable and futile. The classic distinction here has been between (1) pursuit of knowledge for its own sake, and (2) pursuit of knowledge about specific things to be applied for specific purposes. There has been a good deal of controversy, however, between, on the one hand, those who have sharply criticized field studies for slipshod sampling, failure to document description of variance and the wholehearted acceptance of impressionistic accounts and, on the other hand, those who are opposed to sampling, too numerical procedures for quantification on the ground that the social system as an organic whole cannot be investigated by quantitative methods. This report suggests that the issue and controversy have been falsely focused: the situation is that we are not all for or against quantification on an either-or basis: the choice is not between hardness and softness. Quantative data is not always hard and the qualitative soft and deep.

The problem is really one of information. There are several kinds of information: what kinds of methods and what kinds of information are relevant? What is the facility of different methods in getting this information for the different purposes? Incomplete and imperfect answers should be and are useful: we frequently must make decisions

in the light of imperfect data. The real problem is to be clear about what is imperfect information and how this can be improved to enable us to achieve our purposes.

Invariably researchers have a short memory and forget that study and research, art and science should collaborate rather than confront. Theoreticians and practitioners, scholars and scientists, are in an evolutionary process ranging from descriptive to predictive as outlined in the model below.

The advantages and disadvantages of these various stages of the art and science of research are well explained by Campbell and Stanley[1] in their benchmark text, Experimental and Quasi-Experimental Design for Research, which is summarized in the chart below (amended and including a list of SIR/CAR projects utilizing the various designs)

Descriptive
No testing
exploratory

Inferential
theory testing

1. Anecdotal Records - objective observations and records.
2. Case Study - systematic analysis of space, time and form.
3. Problem Solving - short term - stimulus response.
4. Cross sectional Survey T_1 - no backward or forward look.
5. Cross sectional Survey T_1-T_N - significant N over long periods of time.
6. Longitudinal slice - same subjects over time and difference beginning to and or at specific times - ex. G&D.
7. Environmental impingement and determinism (idiographic).
8. Genetic determinism or structureal heredity (nomothetic).
9. Construction determinism - reafying a quality or qualities to allow prediction.

Whenever possible we should substitute experimental for descriptive and predictive for descriptive.

Donald T. Campbell & Julian C. Stanley, EXPERIMENTAL AND QUASI-EXPERIMENTAL DESIGNS FOR RESEARCH. Chicago: Rand McNally & Co., 1966. p. 84

Table 1: Sources of Invalidity...(p. 84)

O = observe, test
X = treatment
R = random sample
\+ = controlled
\- = definite weakness
? = source of concern
= not relevant

	Internal								External			
	History	Maturation	Testing	Instrumentation	Regression	Selection	Mortality	Interaction Selctn x Matrtn	Interaction of: Test & X	Selctn & X	Reactive Arr.	Multiple X
Pre-Experimental												
1. One-shot Case Study X O-Little League (LL)-Sandwich East (SE)	-	-				-	-			-		
2. One-group, Pre- & Post- O X O -Little League (LL)-Windsor West (WW)	-	-	-	-	+	+	-		-	-	?	
3. Static-group Comprson X O -Minor Hockey (MH)-Windsor Minor Hockey (WMH) O	+	?	+	+	+	-	-	-		-		
True Experimental												
4. Pre- & Posttest Control Group R O X O-LL District 5 Windsor-Canada Council R O O	+	+	+	+	+	+	+	+	-	?	?	
5. Solomon Four-group R O X O R O O R X O R O	+	+	+	+	+	+	+	+	+	?	?	
6. Posttest Only R X O Control Group R O-Ministry of Education	+	+	+	+	+	+	+	+	+	?	?	
Quasi-Experimental (Table 2, p. 40)												
7. Time Series trend O O O O X O O O O-Canada Council	-	+	+	?	+	+	+	+	-	?	?	
8. Equvlnt Time Samples $X_1O\ X_0O\ X_1O\ X_0O$. etc..	+	+	+	+	+	+	+	+	-	?	-	-
9. Equvlnt Matrls Samples $M_aX_1O\ M_bX_0O\ M_cX_1O\ M_dX_0O$. etc.	+	+	+	+	+	+	+	+	-	?	?	-
10. Nonequvlnt Contrl Grp O X O O O	+	+	+	+	?	+	+	-	-	?	?	
11. Counterbalanced (???) A. $X_1O\ X_2O\ X_3O\ X_4O$ B. $X_2O\ X_4O\ X_1O\ X_3O$ C. $X_3O\ X_1O\ X_4O\ X_2O$ D. $X_4O\ X_3O\ X_2O\ X_1O$ -Ministry of Education	+	+	+	+	+	+	+	?	?	?	?	-

Note: Balanced Latin Square has order in Row 1: 1243
1, 2, n, 3, n - 1, 4, n - 2, etc. Add 1 going down columns. Subscripts should be: 2314 3421 4132

Quasi-Experimental Designs 12 thru 16 on next page.

Table 2, cont.

	Internal								External			
	History	Maturation	Testing	Instrumentation	Regression	Selection	Mortality	Interaction Selctn X Matrtn	Interaction of: Test & X	Selctn&X	Reactive Arr.	Multiple X
12. Seprt Sampl. Pre- Post. R O (X) R X O - Canada Council	-	-	+	?	+	+	-	+	+	+	+	
12a. R O (X) R X O R O (X) R X O	+	-	+	?	+	+	-	+	+	+	+	
12b. R O_1 (X) R O_2 (X) R X O_3	-	+	+	?	+	+	-	?	+	+	+	
12c. R O_1 X O_2 R X O_3 NAPECW/NCPEAM	-	-	+	?	+	+	+	-	+	+	+	
13. Seprt Sampl. Pre- Post. Control Group R O (X) R X O R O R O	+	+	+	+	+	+	+	-	+	+	+	(Table 3 p. 56)
13a. /R O (X) / /R O.../ /R X O/ /R ...O/ R'/R O (X) O/R'/R O.../ /R X O/ /R ...O/ /R O (X) / /R O.../ /R X O/ /R ...O/	+	+	+	+	+	+	+	+	+	+	+	
14. Multiple Time-Series O O OXO O O O O O O O O	+	+	+	+	+	+	+	+	-	-	?	
15. Institutional Cycle Class A X O_1 Class B1 R O_2 X O_3 Class B2 R X O_4 Class C O_5 X Gen.Pop. Class B O_6 Control Class C O_7												
$O_2 < O_1$ & $O_5 < O_4$	+	-	+	+	?	-	?		+	?	+	
$O_2 < O_3$	-	-	-	?	?	+	+		+	?	+	
$O_2 < O_4$	-	-	+	?	?	+	?		+	?	?	
$O_6 = O_7$ & $O_{2y} = O_{2o}$		+						-				
16. Regression Discontinuity	+	+	+	?	+	+	?	+	+	-	+	+

1. History = Specific events +X between O_1 and O_2.
2. Maturation = processes within S operating as function of passage of time par
3. Testing = effects of taking test on O_2.
4. Instrumentation = changes in calibration or in observers or scorers.
5. Statistical Regression = groups selected for extreme scores tend to regress to mean.
6. Selection = biases resulting in differential selection of S from comparison groups.
7. Mortality = differential loss of S from comparison groups.

Study/research (experimentation) is taken in its etymologically correct meaning of 'to try, to test'--rather than in the misuse sometimes found in the less perspicacious (or less classically-educated) followers of the establishment, who interpret it as referring only to manipulative research or, still more erroneously, only to manipulative research in the laboratory.[2] SIR/CAR has not defined experimental in the narrow sense, implying a method in which the experimenter exercises strict control over the values of the central independent variables. Rather, we have included in the definition all study/research in which important questions in the area of sport and society have been studied with techniques that are either logical (scholarly) or mathematical (scientific) in their treatment of the critical variables and the derivation of justifiable conclusions.[3] It is this broader definition of experimental which is employed as the criteria for selecting study/research projects included in the perview of SIR/CAR.

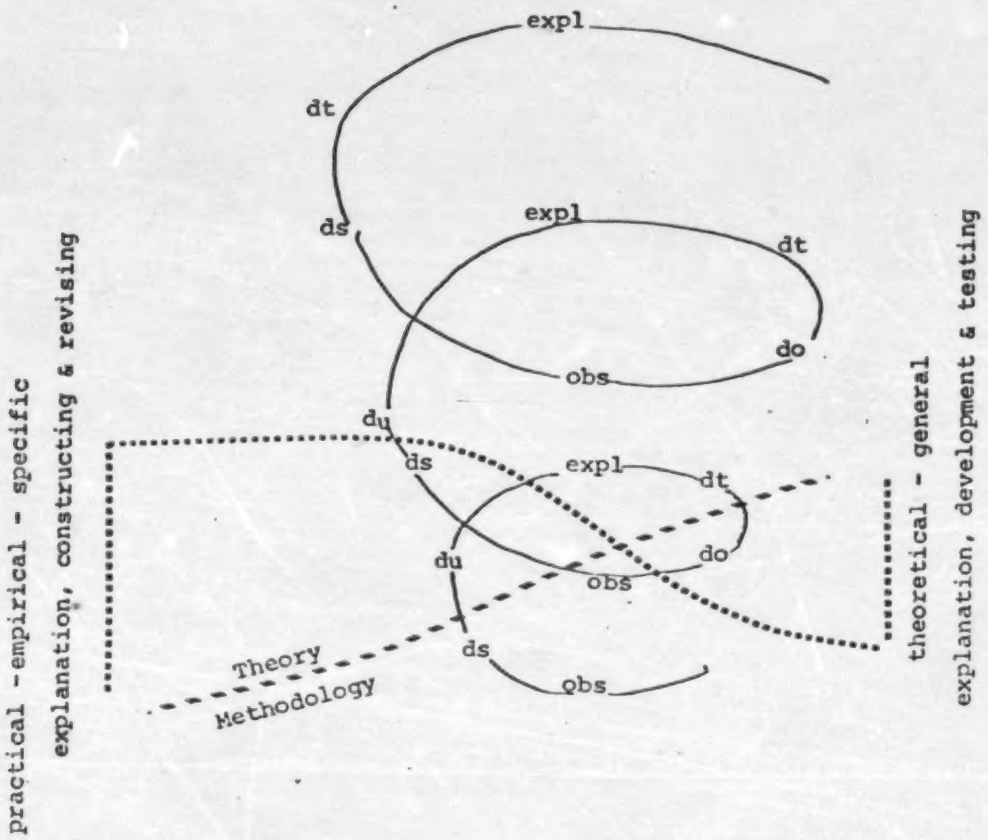
The Cycle of Science model and the Reality Rectangle below show symbolically the two viable alternatives to research.[4] As the Cycle of Science indicates, scholars and scientists interested in understanding a phenomenon and/or the universe can either (1) go from observations or evidence (obs) to description of patterns in the sample observations obtained (ds), to description of patterns in the parent class (or universe) to which the sample belongs (du), to explanations or theories to account for described observations and guide further investigation (expl), to descriptive inference derived from theory (dt), to empirical interpretation in operationalized or procedural terms of theoretical inference to be investigated (do), and return ultimately to observations; or (2) reverse

THE CYCLE OF SCIENCE

Explanation constructing and revising to ...
(observation to description to explanation)

Explanation developing and testing to ...
(explanation to description to observation

Explanation constructing and ...



obs: observation or evidence

ds: description of pattern in sample of observations obtained

du: description of pattern in parent class (or universe) to which sample belongs

expl: explanation or theory to account for described observation and guide further investigation

dt: descriptive inference derived from theory

do: empirical interpretation (in operationalized or procedural terms) of theoretical inference to be investigated

the process going from explanation to theory to operationalization to observation to description of the sample and description of the universe, etc. The lower half of the Cycle (observation, description of the sample and description of operationalized theory - obs, ds, do) deals with methodology while the upper portion (description of the universe, explanation, and descriptive inference derived from theory - du, expl, and dt) deals with theory. Similarly, the right hand half of the Cycle (obs, ds, du) deals with practical empirical - specific explanations constructing and revising; while the right hand half of the cycle (expl, dt, do) deals with theoretical or general explanations, development and testing.

The Rectangle of Reality similarly shows that in understanding nature or reality both practitioners and theoreticians have a role to play.[5] We can either proceed inductively from the particular to the general; or deductively in reverse order. In the inductive process we take heuristic measurements and conceptualize a model from the mass of data; whereas in the deductive process we go from theory to conceptualize and operationalize so that we can take measurements to test our model on the basis of the mass of data which we will accumulate. In the inductive process the professional deals with the concrete, extrinsic and instrumental to observe or bring about change to be applied for action. In the deductive process disciplinarians focus on the abstract, intrinsic and essentialistic in order to understand nature through pure and/or basic research.

Both approaches have contributed appreciably to the advancement of mankind. Pure Basic Research system (emphasis on theory, cycle of science or deductive in the reality rectangle) advocates an operational procedure with research theoreticians developing a discipline and

concrete - extrinsic - instrumental
(quantity) profession - change - applied and action

inductive - particular

Heuristic measure ⟶ conceptualize
model from mass of data

Hunch - Suspicion

Assumption - assertions (not to be examined)

Presumption - principle directing observation

Concepts - elements definition -
what is to be measured - facts exist
sign pointing to commonality

Analogy - simile or metaphor ⟶ computer simulation

Proposition - a tentative explanation

Question - relevant, logical explanation of phenomenon
or
Hypothesis - neat quantitative analysis: ⟨,=,⟩ (to be tested)
Paradigm - research methodology

Model - symbolic representation $E = MC^2$

Typology - rough categorization - phenotypic

Taxonomy - classification - genotypic

Theory - set of assumptions from which
by pure logic - math process a larger
set of empirical laws can be derived -
interrelated declarative statements
Theory = symbolic representation
Law - mathematical equation

Theory - conceptualize ⟶ measures

deductive - general

abstract (quality) intrinsic essentialistic

discipline - understanding - pure and basic

Goal - reduce the probability of seeing the world as we would like to see it exist rather than as it does exist - rule out plausible rival hypotheses which make comparison ambiguous and tentative

Development of ability to be objective and value free
in administrative analysis with emphasis on
EFFECTIVE
Get the job done
Achievement (Halpin)
Initiation of structure (Stogdill) and
EFFICIENT
Least expenditure of human and physical resources
Maintenance (Halpin)
Consideration (Stogdill)

Don't talk about good and bad, or right and wrong,
rather effective and efficient.

middlemen subsequently disseminating the knowledge to practitioners and professionals. The focus is on the discipline. The great shortcoming of this procedure has been the tendency of disciplinarians to restrict communication among themselves or an abortion of the knowledge as it passes from theoretician to middleman to practitioner/professional. Applied Action Research has the disadvantage of neglecting the direction of theory and/or of failing to cluster the results of the heuristic data bank of the community of scholars/scientists. Change Agent Research, on the other hand, advocates a combination of practitioner and theoretician, with the emphasis on professional rather than discipline. Advocates maintain that this not only opens the line of communication from the theoretician to practitioner, but also from the practitioner to the theoretician. Both have a great deal to contribute in dealing with problems of society. Kurt Lewin stated "There is nothing so practical as a good theory;" SIR/CAR advocates agree but go on to point out that "There is nothing so theoretical as a good practice". Change Agent Research falls between Pure Basic Research and Applied Action Studies. Pure Basic Research is at one end of the spectrum with almost complete freedom in selecting processing and publishing results but seldom an opportunity to test any direct applications of the finding on practical problems; whereas, Applied Action Study researchers frequently have the satisfaction of seeing their findings put into immediate practical use but seldom an opportunity to decide how, what, and why they conduct particular studies. Change Agent Researchers have some freedom to select their line of study/research, usually have complete control over the model and methodology to be utilized as well as the right to present and publish results, and sometimes have the satisfaction of knowing that they

have influenced it, if not determined, the direction of society and perhaps public policy. These distinctions are brought out on the Research Role Model chart, below.[6]

Regardless of the approach being utilized, theoreticians and practitioners involved in research must avoid consideration of good or bad ends and right or wrong means and focus rather on effectiveness and efficiency (initiation of structure and consideration in Stogdill's[7] terms, achievement and maintenance in Halpin's[8] terms, getting the job done with the least expenditure of human and physical resources in laymen's terms). As pointed out above, the ultimate goal is to see the world as it actually is rather than the way we would like to see it exist.

In summary we can accumulate knowledge individually or collectively in multi disciplinary (confrontation), interdisciplinary (collaboration) or trans or meta professional/discipline (cooperative) Task Forces.[9] Similarly, application of knowledge can employ the traditional three step process of Researcher to Middleperson to Practitioner or a progressive process combining Researchers and Practitioners.

Sir provides a structure, CAR provides a system analysis model, and IDEA provides a study/research methodology for Change Agent Research on the Canadian-American scene. Change by definition and change producing processes have a habit of leaving behind them those who initiated them. Once a model and method is perfected, there is no 'raison d'etre' for the group who invented it. The successful system is absolete. SIR/CAR is far from perfected however, and flexibility and innovation for 'unplanned change' are indigenous to Change Agent Research. We must all avoid the tendency to 'fall in love with our models.' Innovate and improve. You are invited to join SIR/CAR and/or initiate a similar voluntary mutual benefit society in your 'community'.

SIR - Model Variables ↓	Pure Basic Research Hard Science/Scholarship Reflective/Curiosity	Change Agent Research Profession/Discipline, Scholar/ Scientist Frontier Action Research	Applied Action Studies Soft Science/ Scholarship Mission Oriented
1. Ultimate Goal	Scientific Knowledge & Understanding Theory = What & Why Discipline Oriented "Why" Canadian & European Scholar	Institutional/Group Change or Social Change based on Study/Research Practice & Theory Profession/Discipline "How & Why" Canadian/American Synthesis	Problem Solving Applied Solutions to Practical Problems Practice = What Profession Oriented "How to" American Intellect
2. Conflict Problem/Issues Methodology	Rigorous Design & Statistic Treatment Mathematical Quantitative Freedom in Selecting Problem & Stating Results but little Application	Logic & Mathematics Qualitative & Quantitative Access to Data, Problem Statement and Publishing but not "not publishing!"	Statistical & Logic Qualitative Analysis Application but little choice in Selecting Problem & Publishing
3. Structure	Natural Scientist Experimentation/Descriptive Library/Laboratory	Policy Action Research Exploratory, Explaining, Predicting Community Field/Laboratory	Engineering/ Inferential/Predictive Field Studies
4. Individuals & Groups	University Scholars & Scientists Individual Scholars/Scientists Discipline Oriented and Reporting to Peers Granting Agencies	Practitioners & Theoreticians Community & University/College Task Force Reporting to Organization, Public, then Peers Profession/Discipline Oriented	Research Contractors Producers Task Force Profession Oriented and Reporting to Contractors

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2. W.J. McGuire, "Some Intending Reorientations and Social Psychology - from Thoughts Provoked by Kenneth Ring," Journal of Experimental Social Psychology, Vol. 3, (1967),pp. 124-39.

3. B.A. Maher (ed.) Progress in Exp rimental Personality Research (New York: Academic Press, 1965).

4. For a complete description cf the Cycle of Science see "Overview of the Game Called Science" in G.C. Homans, The Nature of Social Science. (New York: Harcourt, Brace and World, Inc. 1967) p. 27. The Reality Rectangle was developed by Dick Moriarty and associates in SIR/CAR in conjunction with project Change Agent Research for Little League Baseball, Canada Council study S72-1765 conducted during the summer of 1973.

5. See J.E. Anderson, "Child Development: An Historic Perspective," Child Development, Vol. 27 (June, 1956), pp. 181-196.

6. Marvin Bressler, "Some Selected Aspects of American Sociology 1959 - 1960," proceeding of the American Academy of Political and Social Sciences, Vol. 337 (September 1961), pp. 146 - 159.

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9. Bob Gorwin and Jason Mellman, "Research Methodology: A Point of View," Review of Educational Research, Vol. XXXIX, (Dec. 5, 1969), p, 555.

5. Stress Value Perspective	Ethically Neutral Value Free No Advocacy Universal Perception Scholarship/Science Truth/Knowledge Confrontation	Value Free (Probable & Impact), Value laden (Desirable) Challenging dominant Canadian/Americal Value Orientation No Advocacy in Research = Unplanned Change Effective/Efficient Achievement/Maintenance Structure Initiation/Consideration Compromise (Dialectic Process)	Dominant American Value Orientation Advocacy Investigation and Legislate Study/Research=Planned Change Good and Bad Right and Wrong Cooperation
6. Strain Internal pressure for Problem Selection	Theoretical Importance of Segmental Problems Microscopic	Practical Social Significance & Theoretical Development of fundamental Issues Macro and Micro	Practical Importance of Important Segmental Problems Macro
Criterian of Adequacy	Rigid Model & Method Coherence/correspondence complete information & data	Flexible Model & Method Perceptiveness/significance sufficient to meet practical & theoretical (state of art)	Applicable Model & Method Usefulness adequate data & information
7. Trend/change Perspective	Functionalism Intrinsic Value Organizational Research	Form follow Function Extrinsic & Intrinsic Value Organizational Analysis, Development & Research	Pragmatism Extrinsic Value Organizational Development
Goal Intellectual Product	Analytic Schemes | Emperical Generalizations	Model & Method Change General Cycle Trends & Tendencies	Implication for Action
	Product Parsimony & Esoteric Development of Theory	Product/Process Laymen's Terms & Redundancy Application to Problems & Development of Theory	Process Professional Language Application to Problems

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